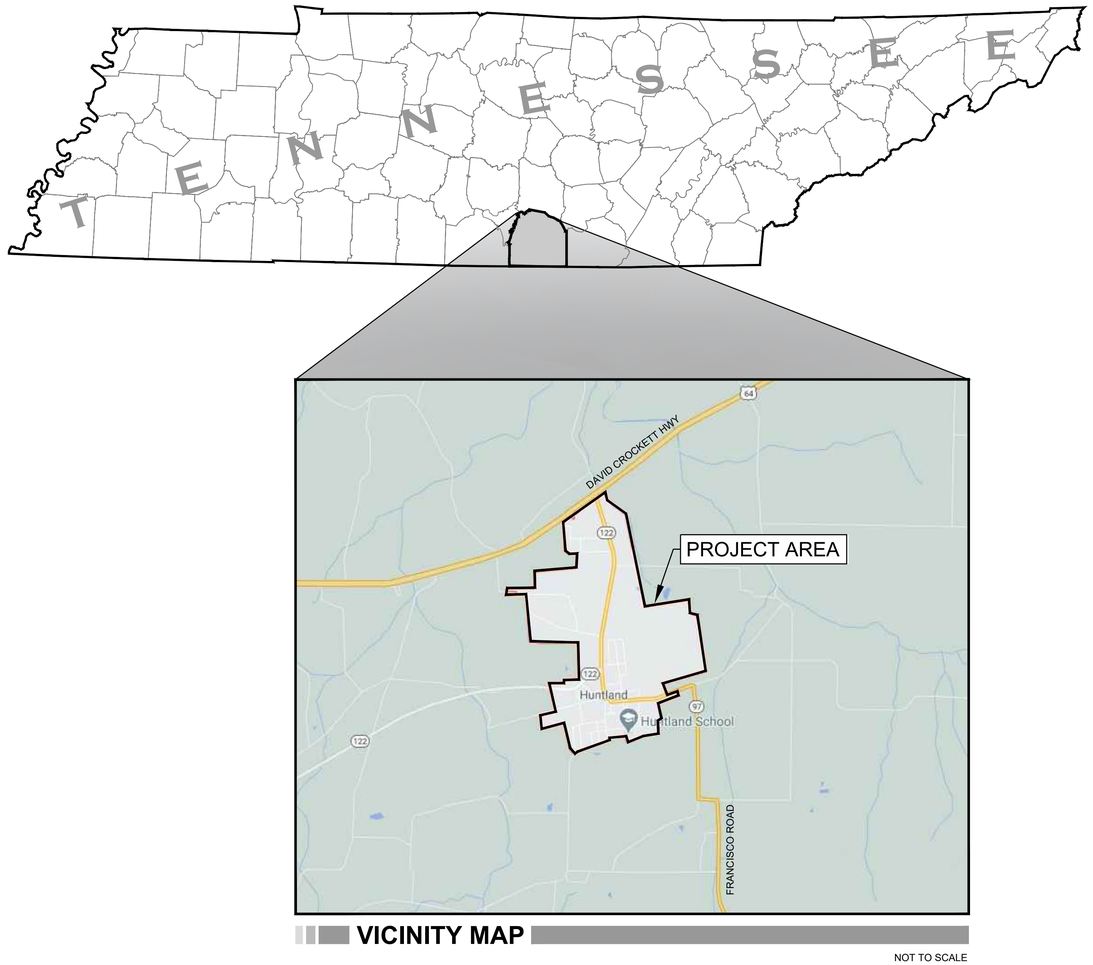
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
PHASE 1

HUNTLAND, FRANKLIN COUNTY, TENNESSEE

EDA INVESTMENT #04-01-07294



VICINITY MAP

NOT TO SCALE

DRAWING INDEX

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT

TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM

ISSUE FOR BID

GRADING & EXCAVATION

1. WHEN SPECIFIC GRADING REQUIREMENTS ARE NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL GRADE ALL AREAS WITHIN THE LIMITS OF CONSTRUCTION, OR OTHERWISE DISTURBED BY CONSTRUCTION,
2. THE CONTRACTOR SHALL PERFORM ALL NECESSARY STRIPPING OF EXISTING TOPSOIL ON THE JOBSITE.
3. NEWLY GRADED, EARTH AREAS NOT TO BE PAVED, RIP-RAPPED, OR STABILIZED, SHALL BE SEEDED IN ACCORDANCE WITH THE SPECIFICATIONS. PRIOR TO SEEDING, A FOUR INCH LAYER OF TOPSOIL SHALL BE PLACED ON THESE AREAS IN ACCORDANCE WITH SAID SPECIFICATIONS.
4. THE CONTRACTOR IS TO LEGALLY DISPOSE OF, AT HIS OWN EXPENSE, ALL UNSUITABLE AND/OR SURPLUS, EXCAVATED MATERIAL.
5. EXCAVATION ADJACENT TO EXISTING PAVEMENT SHALL BE MADE TO A NEAT LINE.
6. NO TREES SHALL BE REMOVED WITHOUT OWNER'S PERMISSION. ALL TREES THAT ARE CUT OR KNOCKED DOWN WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE REMOVED AND DISPOSED OF OFF-SITE AT THE CONTRACTOR'S EXPENSE. BURNING IS NOT PERMITTED, EXCEPT AS PROVIDED IN THE SPECIFICATIONS.

EROSION & SEDIMENT CONTROL

1. ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL REQUIREMENTS SHALL BE FOLLOWED DURING CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO CONTROL EROSION AND WATER POLLUTION THROUGH THE CONSTRUCTION PERIOD. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE IN PLACE BEFORE EARTH MOVING OPERATIONS BEGIN. CLEARING AND GRUBBING SHALL BE HELD TO A MINIMUM WIDTH NECESSARY TO ACCOMMODATE CONSTRUCTION SLOPES. EMBANKMENTS AND EXCAVATED AREAS SHALL BE PROMPTLY STABILIZED TO MINIMIZE EROSION. EROSION CHECKS AND SILT FENCE SHALL BE USED ALONG THE TOE OF FILL SLOPES, IN DITCHES, AND IN OTHER AREAS WHERE EROSION IS A PROBLEM AND SILT-LADEN RUNOFF MAY ENTER A STREAM OR ADJACENT PROPERTY.
2. ANY STOCKPILED SOIL OR FILL MATERIAL SHALL BE LOCATED AND TREATED IN A MANNER TO PREVENT SILT ENTERING STREAMS. NO EXCAVATED MATERIAL SHALL BE DISCHARGED INTO DITCHES. THE CONTRACTOR SHALL DISPOSE OF ALL EXCAVATED MATERIAL IN A LOCATION, APPROVED BY THE ENGINEER, ABOVE THE NORMAL HIGH WATER ELEVATION.
3. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL EROSION CONTROL PROVISIONS AS SET FORTH IN THE EROSION & SEDIMENT CONTROL HANDBOOK AVAILABLE FROM THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION.
4. THE CONTRACTOR SHALL MAINTAIN THE EROSION CONTROL MEASURES THROUGHOUT THE LENGTH OF THE CONTRACT AS REQUIRED.
5. THE CONTRACTOR SHALL PROVIDE TEMPORARY EROSION AND WATER CONTROL MEASURES (SUCH AS BERMS, SEDIMENT BASINS, SLOPE DRAINS, AND SILT FENCES) AS DIRECTED BY THE ENGINEER.
6. NO EARTH OR OTHER ERODIBLE MATERIAL SHALL BE USED TO DIVERT STREAM FLOW OR TO CONSTRUCT COFFERDAMS. CLEAN CUT ROCK WITH FINES MAY BE USED, OR, IN THE CASE OF COFFERDAMS, STEEL SHEETING OR SAND BAGS IS PERMISSIBLE. WATER OR SEDIMENT ISOLATED BY COFFERDAMS SHALL BE PUMPED INTO SEDIMENT BASINS ON THE BANK OF THE STREAM.

UTILITIES

1. LOCATIONS OF UTILITIES, PUBLIC AND/OR PRIVATE, ARE APPROXIMATE ONLY, AND THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD. IT IS POSSIBLE THAT SOME EXISTING FACILITIES ARE NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING ALL UNDERGROUND UTILITY FACILITIES LOCATED AND MARKED PRIOR TO THE BEGINNING OF CONSTRUCTION.
2. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITY OWNERS PRIOR TO INTERRUPTING ANY ELECTRICAL, COMMUNICATIONS, GAS, WATER, OR SEWER SERVICES. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY CUSTOMERS AT LEAST 24 HOURS BEFORE INTERRUPTING THE CUSTOMERS' SERVICE. WHERE INDIVIDUAL SERVICES ARE TO BE DISCONTINUED FOR MORE THAN 8 HOURS, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR PROVIDING TEMPORARY SERVICE SATISFACTORY TO THE AFFECTED CUSTOMER. THE REPAIR OR REPLACEMENT OF UTILITY COMPONENTS SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE UTILITY OWNER. NO SEPARATE PAYMENT SHALL BE MADE FOR THESE ACTIVITIES.
3. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. SHOULD SPECIAL EQUIPMENT BE REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR SHALL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FOR FURNISHING SPECIAL EQUIPMENT SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
4. ANY EXISTING STORM DRAINAGE PIPING DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AS RAPIDLY AS POSSIBLE AND THEN BE INSPECTED BY ITS RESPECTIVE OWNER.
5. IF ANY UTILITIES ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY'S OWNER. REPAIR OF THE UTILITY SHALL THEN BE ACCORDING TO THE OWNER'S INSTRUCTIONS, AND ALL COST PAID FOR BY CONTRACTOR.

MISCELLANEOUS

1. THE ENGINEER SHALL HAVE THE AUTHORITY TO DESIGNATE AND/OR LIMIT AREAS OF CONSTRUCTION.
2. THE OWNER MAKES NO REPRESENTATIONS ABOUT SUBSURFACE CONDITIONS THAT MAY BE ENCOUNTERED WITHIN THE LIMITS OF THE PROJECT. THE CONTRACTOR SHOULD SATISFY HIMSELF BY ON-SITE INSPECTIONS, CORE DRILLINGS, OR OTHER METHODS, OF THE SUBSURFACE CONDITIONS THAT MAY BE ENCOUNTERED. THE RISK OF ENCOUNTERING AND CORRECTING UNFAVORABLE SUBSURFACE CONDITIONS SHALL BE BORNE SOLELY BY THE CONTRACTOR.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL FIELD LAYOUTS.
4. ALL SALVAGEABLE MATERIAL FROM EXISTING PIPING AND STRUCTURES SHALL REMAIN PROPERTY OF THE OWNER. SAID MATERIAL SHALL BE CLEANED AND THEN DELIVERED TO THE OWNER AT A LOCATION DESIGNATED BY THE ENGINEER.
5. ALL UNSUITABLE MATERIAL, AS DETERMINED BY THE ENGINEER OR THROUGH TESTING, IS TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.
6. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING AT HIS OWN EXPENSE ANY AND ALL DAMAGE THAT MAY OCCUR INSIDE AND OUTSIDE THE LIMITS OF THIS PROJECT AS A RESULT OF CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PAYMENT FOR TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND ORDERING APPROPRIATE TESTS AS REQUIRED. THE TESTING COMPANIES SHALL BE APPROVED BY OWNER AND ENGINEER.
8. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF THE PROJECT WITHIN THIRTY (30) DAYS AFTER SUBSTANTIAL COMPLETION OF THE WORK. ("SUBSTANTIAL COMPLETION" SHALL BE DEFINED BY THE SPECIFICATIONS). THE OWNER RESERVES THE RIGHT TO WITHHOLD RETAINAGE UNTIL RECEIVING A COMPLETE SET OF SAID RECORD DRAWINGS.
9. SHOULD THERE BE A CONFLICT BETWEEN THESE GENERAL NOTES, CONTRACT DRAWINGS, AND/OR SPECIFICATIONS, THE MOST RESTRICTIVE INTERPRETATION IN FAVOR OF THE OWNER SHALL PREVAIL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY CLARIFICATION OR INTERPRETATION OF GENERAL NOTES, CONTRACT DRAWINGS, AND/OR SPECIFICATIONS, IN ADVANCE AND IN WRITING, FROM THE ENGINEER.

PROJECT SPECIFIC NOTES

1. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING STRUCTURES PRIOR TO SUBMITTAL OF EQUIPMENT OR MATERIALS.
2. REPLACE ALL EXISTING PAVEMENT IN STREETS, DRIVEWAYS, OR PARKING AREAS WHICH IS REMOVED, DESTROYED, OR DAMAGED BY CONSTRUCTION OF IMPROVEMENTS.
3. MINIMUM SEPARATION FROM OTHER UNDERGROUND UTILITIES IN THE TDOT ROW SHALL BE 36 INCHES.
4. MINIMUM DEPTH UNDER GUARDRAILS IN TDOT ROW SHALL BE 10 FEET.

ABBREVIATIONS

GENERAL

ABV	ABOVE
AD	AREA DRAIN
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT
B&J	BORE AND JACK
BET	BETWEEN
BGS	BELOW GRADE SURFACE
BLDG	BUILDING
BLW	BELOW
BO	BOTTOM OF
BOT	BOTTOM
CLG	CEILING
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS
CTR	CENTER
DBL	DOUBLE
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DR	DOOR
DS	DOWN SPOUT
DWG	DRAWING
E	EAST
EA	EACH
ELECT	ELECTRIC(AL)
ELEV	ELEVATION
EMER	EMERGENCY
ENCL	ENCLOSURE
EQ	EQUAL
ETR	EXISTING TO REMAIN
EXST	EXISTING
EQUIP	EQUIPMENT
FA	FIRE ALARM
FD	FLOOR DRAIN
FH	FIRE HYDRANT
FIN	FINISH
FLR	FLOOR
FT	FOOT OR FEET
FO	FACE OF
GAL	GALLON
GALV	GALVANIZED
GND	GROUND
GV	GATE VALVE
HC	HANDICAPPED
HDWR	HARDWARE
HT	HEIGHT
HORIZ	HORIZONTAL
HR	HOUR
ID	INNER DIAMETER
INSUL	INSULATION
INT	INTERIOR
KILO	KILOGRAM
LB(S)	POUNDS
LDG	LANDING
LF	LINEAR FOOT
LT	LIGHT
MAX	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MTD	MOUNTED
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER (DIMENSION)
OC	OPEN CUT (METHOD)
OD	OUTSIDE DIAMETER
OFF	OFFICE
OPG	OPENING
OPP	OPPOSITE
PNT	POINT
PR	PAIR
PTD	PAINTED
R	RISER
RAD	RADIUS
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCED
REQ	REQUIRED
RM	ROOM
RO	ROUGH OPENING
S	SOUTH
SC	SERVICE CONNECTION
SCHED	SCHEDULED
SEAL	SEALANT
SECT	SECTION
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SS	SANITARY SEWER
STD	STANDARD
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SYM	SYMMETRICAL
TEL	TELEPHONE
THK	THICK
THR	THRESHOLD
TO	TOP OF
TYP	TYPICAL
UC	UNDERCUT
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WEST
WT	WEIGHT
W/	WITH
W/O	WITHOUT
WP	WATERPROOF

PIPE MATERIALS

BSP	BLACK STEEL PIPE
CIP	CAST IRON PIPE
CISP	CAST IRON SOIL PIPE
CMP	CORRUGATED METAL PIPE
CP	CONCRETE PIPE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CSP	CARBON STEEL PIPE (SEAMLESS)
CU	COPPER
DIP	DUCTILE IRON PIPE
FRP	FIBERGLASS REINFORCED PIPE
GIP	GALVANIZED IRON PIPE
GSP	GALVANIZED STEEL PIPE
HDPE	HIGH DENSITY POLYETHLENE
IP	IRON PIPE
PB	POLYBUTLENE
PCP	PRESTRESSED CONCRETE PRESSURE
PE	POLYETHLENE
PP	POLYPROPYLENE
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RH	RUBBER HOSE
SSTL	STAINLESS STEEL
STL	STEEL (FABRICATED)
VCP	VITRIFIED CLAY PIPE

JOINT TYPES

CC	CORRUGATED COUPLING
CPL	COUPLING
FLG	FLANGE
FREJ	FLEXIBLE RUBBER EXPANSION JOINT
MJ	MECHANICAL JOINT
OR	"O" RING
PE	PLAIN END
PO	PUSH ON
RJ	RESTRAINED JOINT
SW	SOLVENT WELD
SWT	SWEAT
NPT	THREADED

VALVE TYPES

ARV	AIR RELEASE VALVE
BLV	BALL VALVE
BFV	BUTTERFLY VALVE
CNV	CONE VALVE
CV	CHECK VALVE
DV	DIAPHRAGM VALVE
GV	GATE VALVE
GBV	GLOBE VALVE
KV	KNIFE VALVE
MO	MOTOR OPERATED VALVE
MV	MUD VALVE
NV	NEEDLE VALVE
PHV	PINCH VALVE
PV	PLUG VALVE
PRV	PRESSURE REDUCING VALVE

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH	DRAWN BY
	CAJ
	APPROVED BY
	JDF

DATE	ISSUE
3/5/21	IFB

TITLE
GENERAL NOTES

DRAWING NO.
G2.0

CIVIL

EXISTING	PROPOSED
GAS LINE — G —	GAS LINE — G —
GAS LINE ABANDONED — G —	
WATER LINE — W —	WATER LINE — W —
WATER LINE ABANDONED — W —	
SANITARY SEWER — SS —	SANITARY SEWER — SS —
SANITARY SEWER ABANDONED — SS —	
FORCEMAIN — FM —	FORCEMAIN — FM —
FORCEMAIN ABANDONED — FM —	
STORM SEWER — ST —	STORM SEWER — ST —
OVERHEAD ELECTRIC — OHE —	PERFORATED PIPE
UNDERGROUND ELECTRIC — UGE —	
FIBER OPTICS — FO —	
BUILDING/STRUCTURE	BUILDING/STRUCTURE
ROADWAY	ROADWAY
ROADWAY CENTERLINE	ROADWAY CENTERLINE
SIDEWALK/CONCRETE	SIDEWALK/CONCRETE
CONTOUR (MAJOR)	CONTOUR (MAJOR)
CONTOUR (MINOR)	CONTOUR (MINOR)
DITCH LINE	DITCH LINE
STREAM	
PROPERTY LINE	
EASEMENT	
AIR RELEASE VALVE	AIR RELEASE VALVE
SANITARY SEWER MANHOLE	SANITARY SEWER MANHOLE
CLEANOUT	CLEANOUT
CATCH BASIN	CATCH BASIN
DRAINAGE MANHOLE	DRAINAGE MANHOLE
HEADWALL	HEADWALL
WATER METER BOX	WATER METER BOX
VALVE	VALVE
HYDRANT	HYDRANT
CAP	CAP
	TAPPING SLEEVE ASSEMBLY
POWER POLE	POWER POLE
LIGHT POLE	LIGHT POLE
GUY	GUY
COMMUNICATIONS MANHOLE	COMMUNICATIONS MANHOLE

PROCESS

PIPING & STRUCTURE

	EXISTING	NEW
PIPING		
STRUCTURE		

VALVES & FITTINGS

	SINGLE LINE	DOUBLE LINE
BALL VALVE (BLV)		
BUTTERFLY VALVE (BFV)		
PLUG VALVE (PV)		
CHECK VALVE (CV)		
GATE VALVE (GV)		
KNIFE GATE VALVE (KGV)		
SOLENOID VALVE (SV)		
NEEDLE VALVE (NV)		
FLUSHING CONNECTION W/ QUICK DISCONNECT		
PIPING		
WELDED JOINT		
FLANGED JOINT		
MECHANICAL JOINT		
PUSH-ON		
FLANGE ADAPTER (FA)		
RESTRAINED FLANGE ADAPTER (RFA)		
EXPANSION COUPLING		

PIPE LINE IDENTIFICATION

12" XX-XXX

- XX — MATERIAL
- XX — SERVICE
- XXX — NOMINAL PIPE DIAMETER

MISCELLANEOUS

EROSION CONTROL

- SILT FENCE — SF —
- RIP-RAP
- INLET PROTECTION
- CHECK DAM
- EROSION EEL / WATTLE
- CONSTRUCTION ENTRANCE

DEMOLITION

- STRUCTURE/EQUIPMENT
- PIPING (SINGLE LINE) -/-/-/-/-/-/-/-/-/-/-/-
- PIPING (DOUBLE LINE)

DRAWING ANNOTATION

- DETAIL MARKER — DETAIL REF. / XXX / XXX / SHEET REF.
- SECTION MARKER — DETAIL REF. / XXX / XXX / SHEET REF. / XXX / XXX
- ELEVATION MARKER — ELEVATION REF. / XXX / XXX / SHEET REF.
- EQUIPMENT MARKER — XX
- SHEET SPECIFIC NOTE MARKER — XX
- REVISION CLOUD & MARKER — XX
- CENTERLINE — CL

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

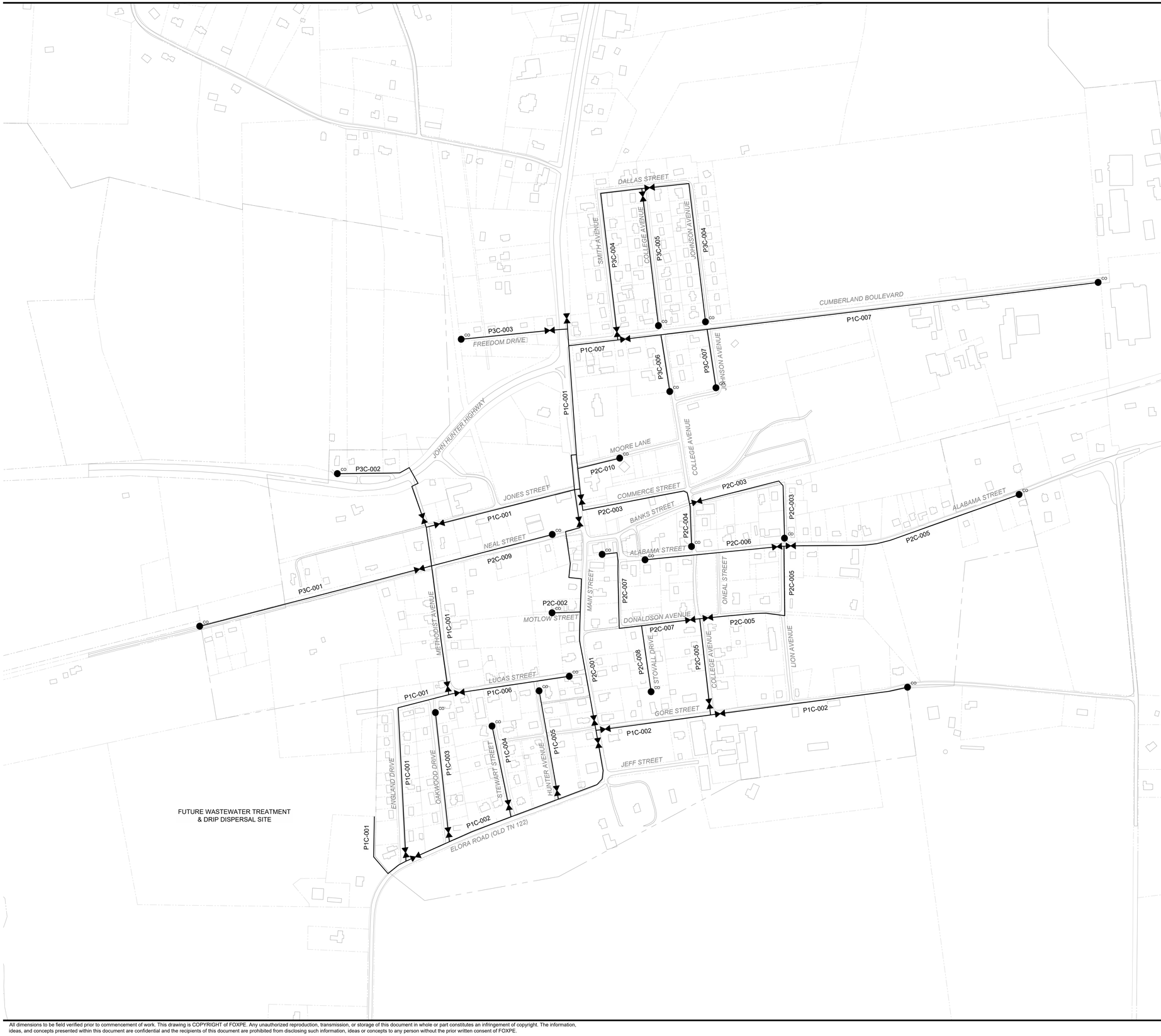
LOGO

NORTH	DRAWN BY: CAJ
	APPROVED BY: JDF

DATE	ISSUE
3/5/21	IFB

TITLE
LEGEND & SYMBOLOGY

DRAWING NO.
G3.0



PIPE RUN TABLE

PIPE RUN	DIAMETER (IN.)	SHEET REFERENCE
P1C-001	6 & 8	C1.01
		C1.02
		C1.03
		C1.04
P1C-002	2 & 4	C1.05
		C1.06
		C1.07
P1C-003	2	C1.08
P1C-004	2	C1.09
P1C-005	2	C1.10
P1C-006	2	C1.11
P1C-007	2 & 3	C1.12
		C1.13
		C1.14

GRAPHIC SCALE
300 0 150 300 600
SCALE: 1" = 300'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

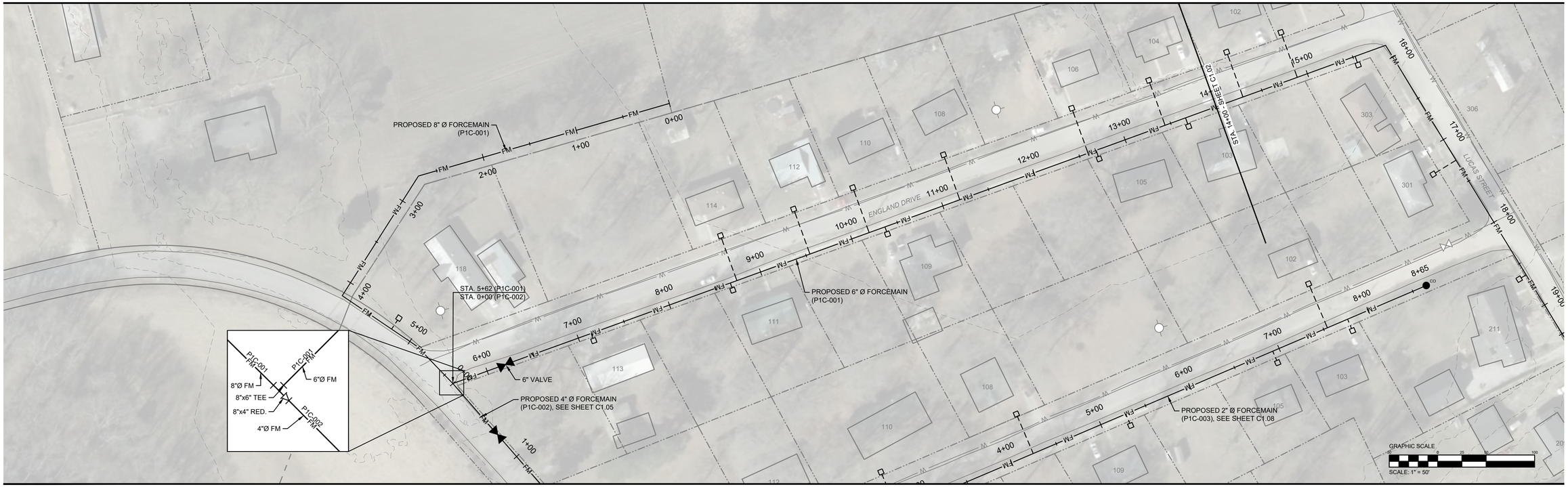
DRAWN BY
CAJ

APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
OVERALL
SYSTEM LAYOUT

DRAWING NO.
C0.00



PROPOSED FORCEMAIN P1C-001 - PROFILE
0+00 TO 14+00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

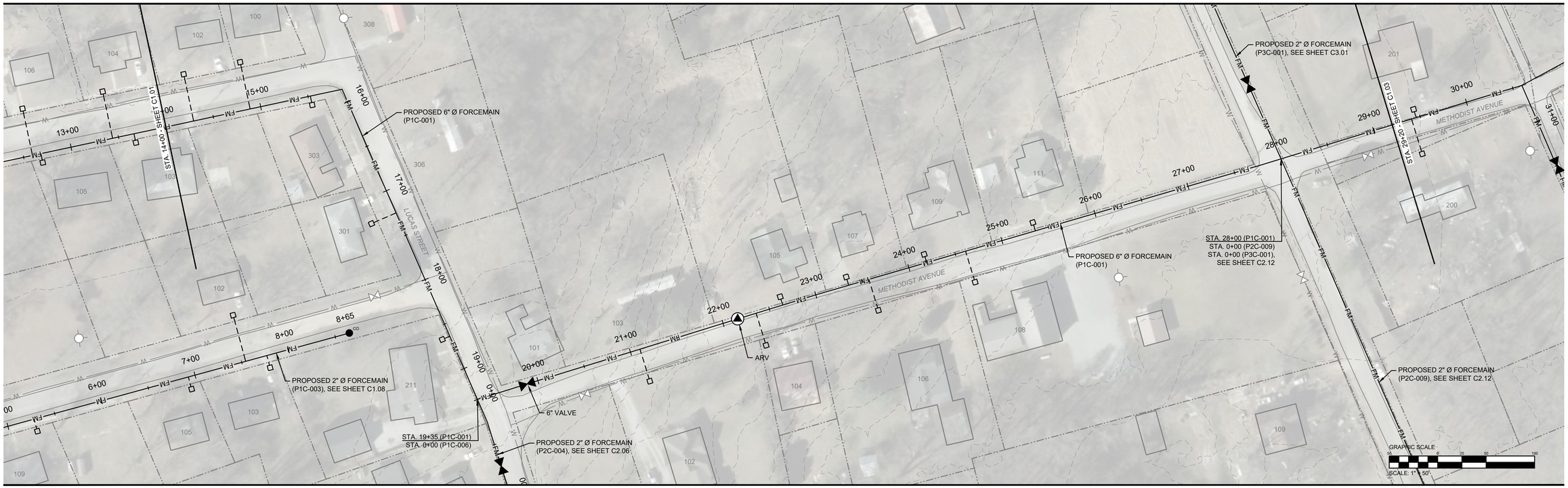
DRAWN BY
CAJ

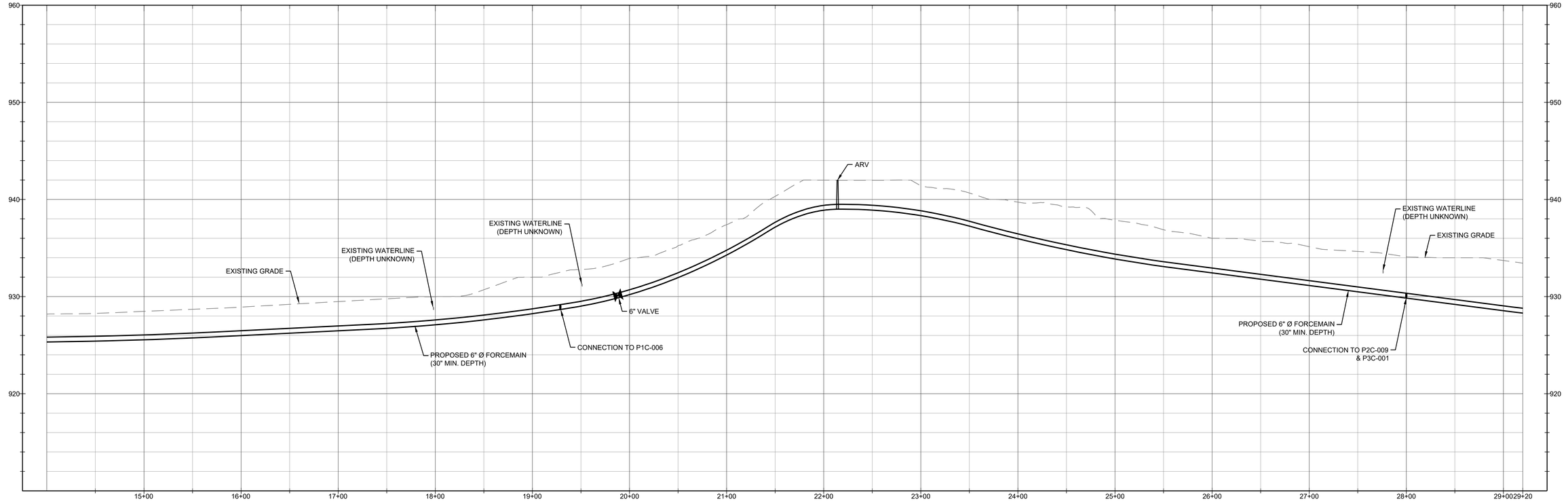
APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE
P1C-001

DRAWING NO.
C1.01





PROPOSED FORCEMAIN P1C-001 - PROFILE
14+00 TO 29+20
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

ENGINEER SEAL

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

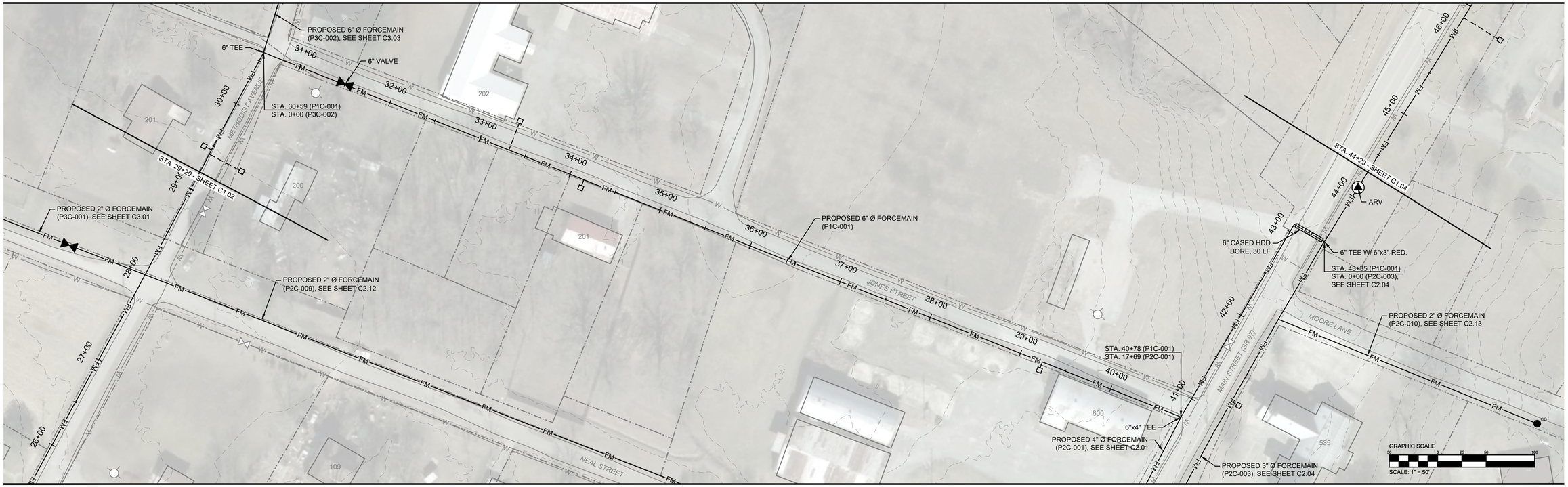
DRAWN BY
CAJ

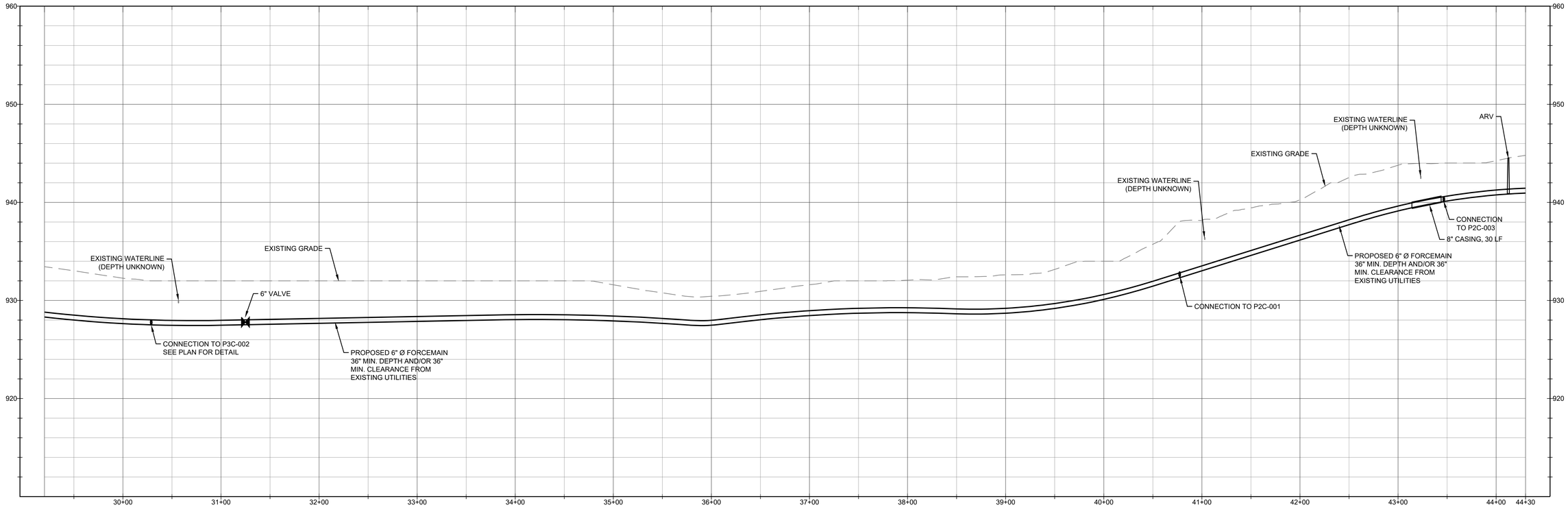
APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE
P1C-001

DRAWING NO.
C1.02





PROPOSED FORCEMAIN P1C-001 - PROFILE
29+20 TO 44+30
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE
WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

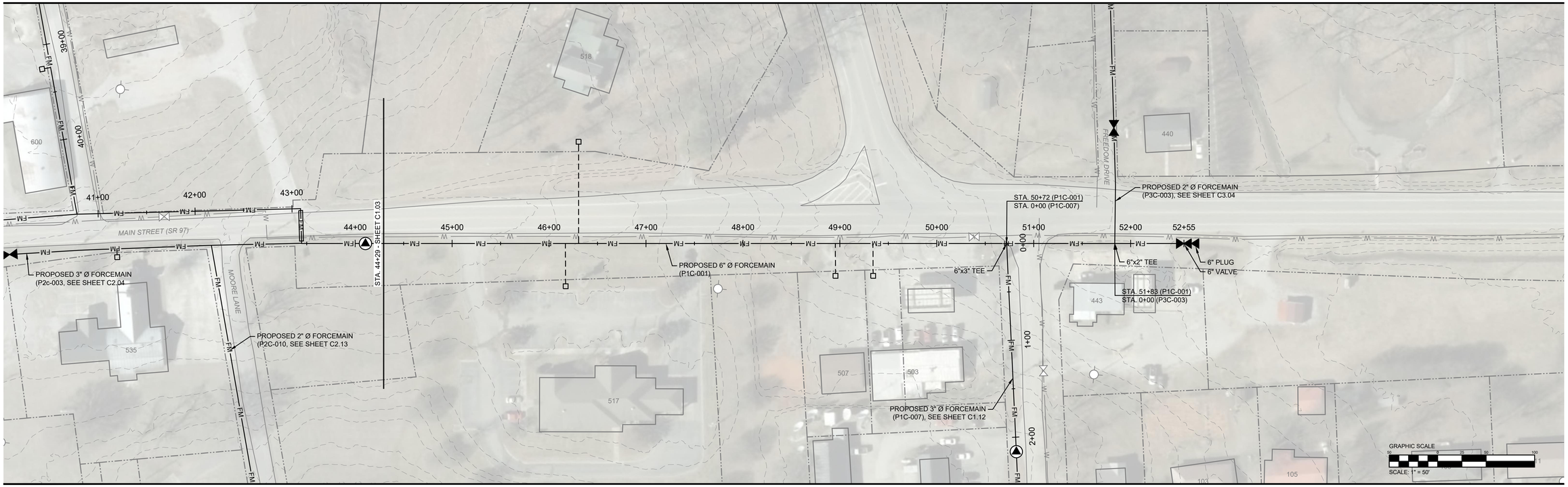
NORTH

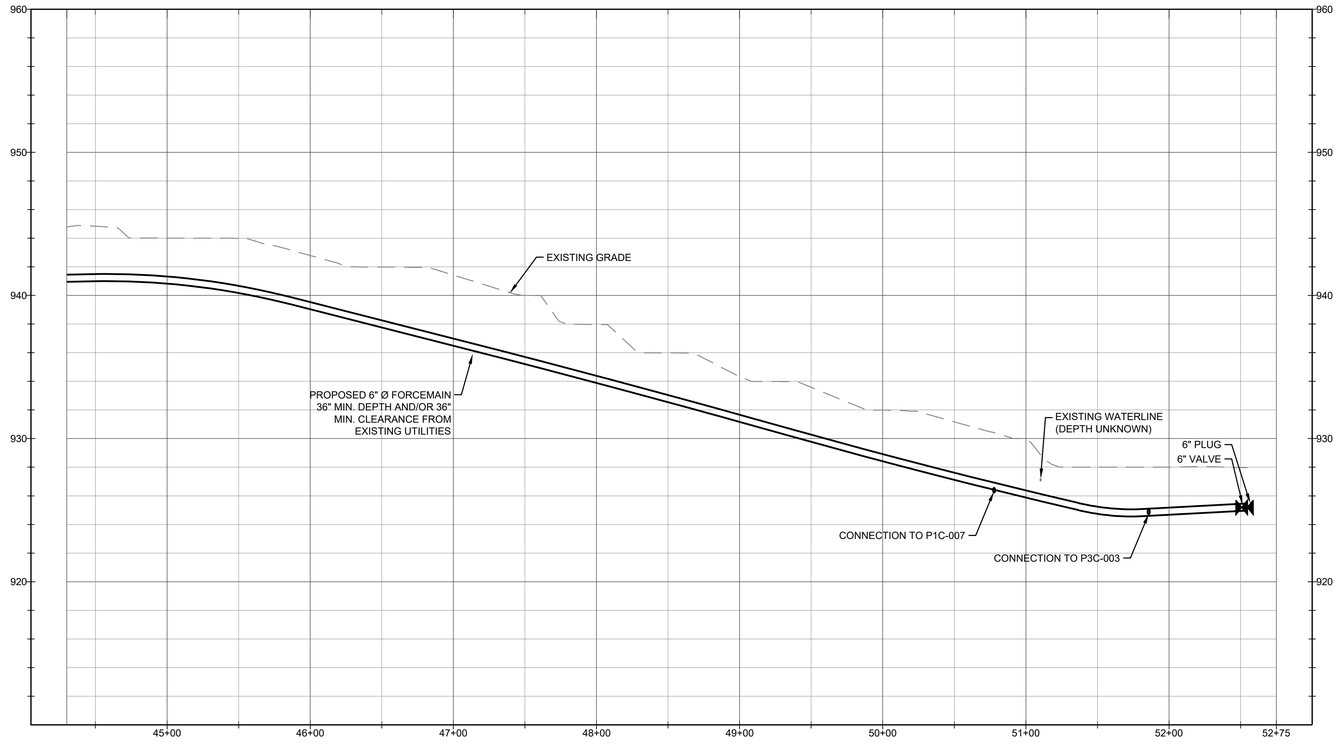
DRAWN BY	APPROVED BY
CAJ	JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE
P1C-001

DRAWING NO.
C1.03





PROPOSED FORCEMAIN P1C-001 - PROFILE
44+30 TO 52+75
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

ENGINEER SEAL

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

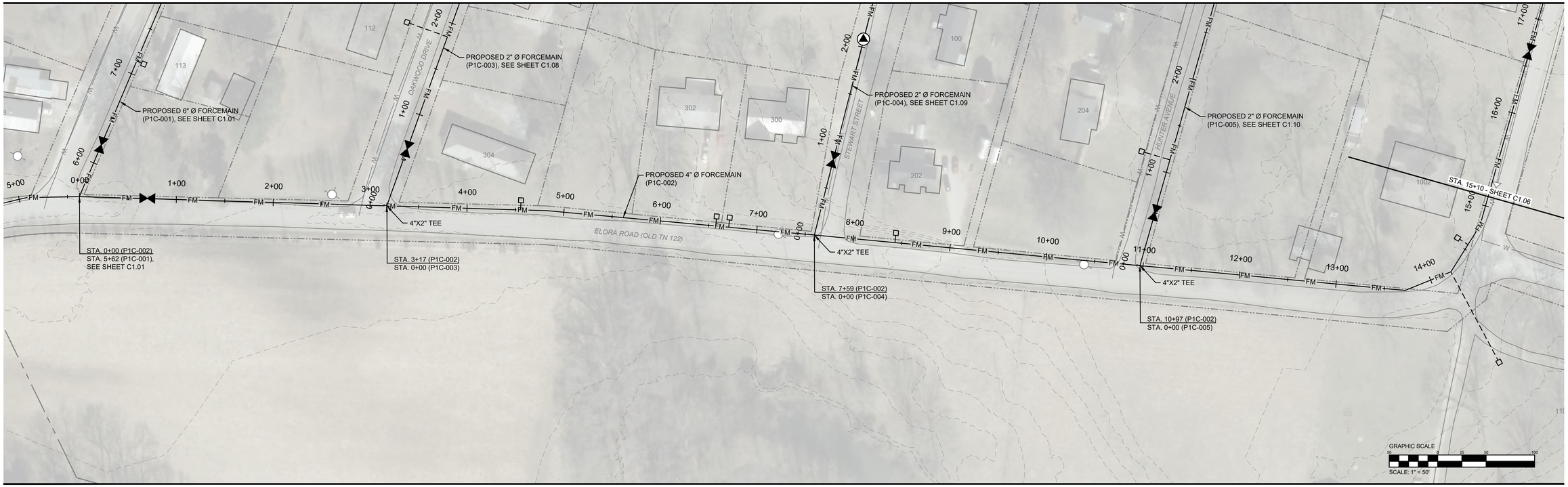
DRAWN BY
CAJ

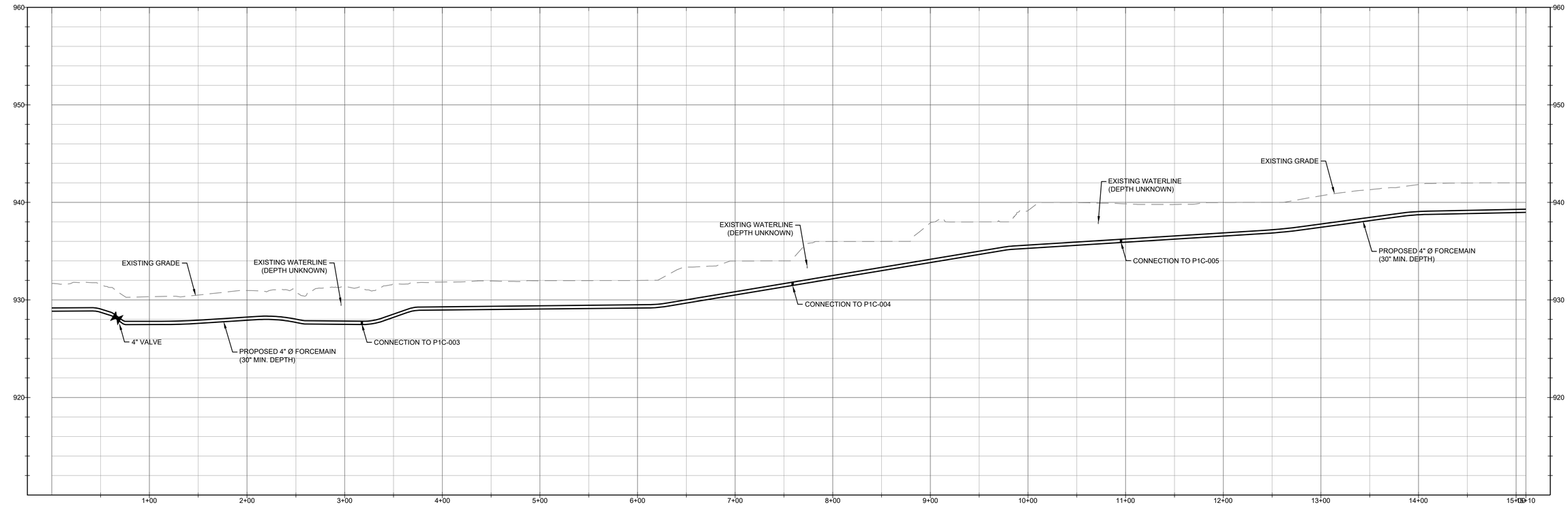
APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE
P1C-001

DRAWING NO.
C1.04





PROPOSED FORCEMAIN P1C-002 - PROFILE
0+00 TO 15+10
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

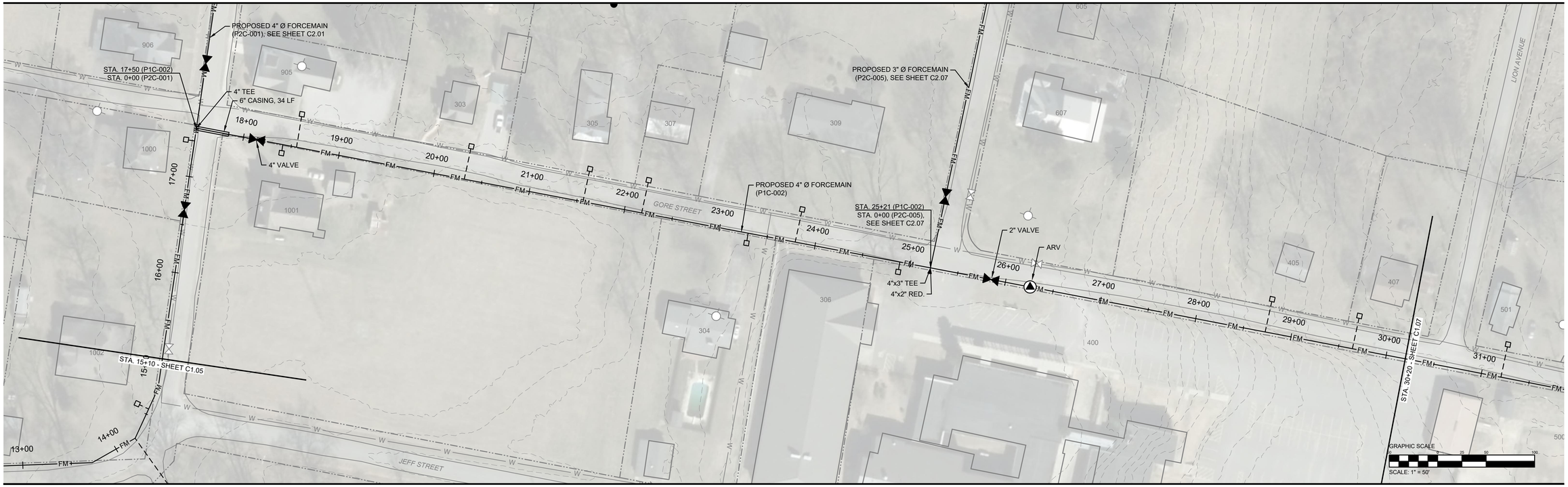
DRAWN BY
CAJ

APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE
P1C-002

DRAWING NO.
C1.05



PROPOSED FORCEMAIN P1C-002 - PROFILE
15+10 TO 30+20
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

ENGINEER SEAL

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

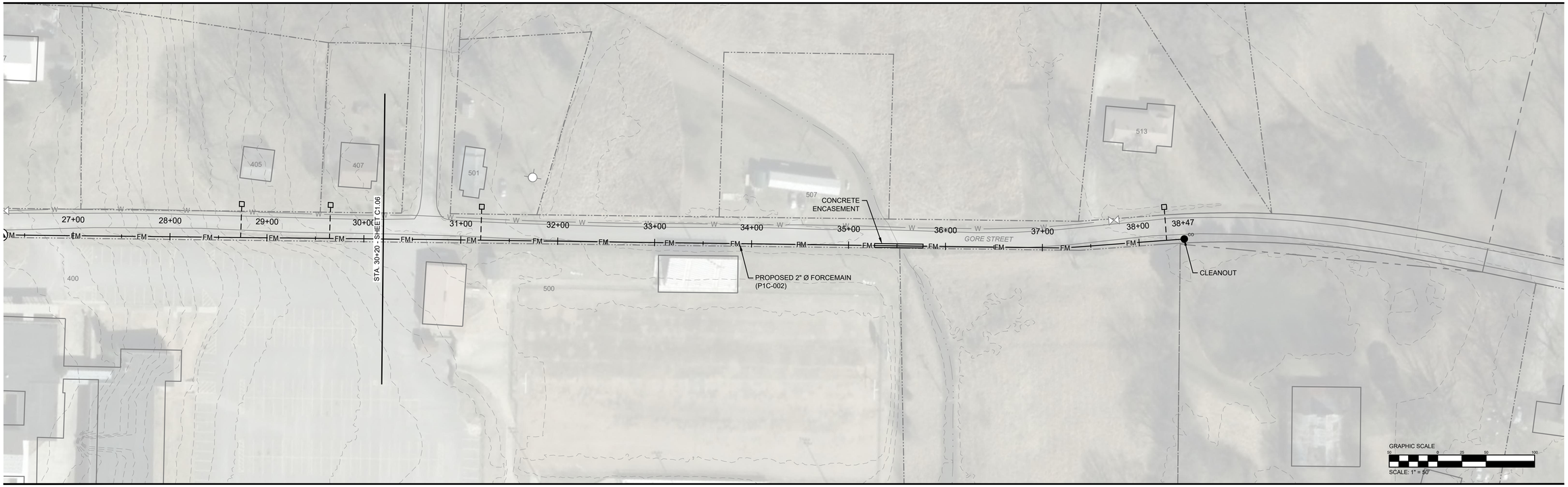
DRAWN BY
CAJ

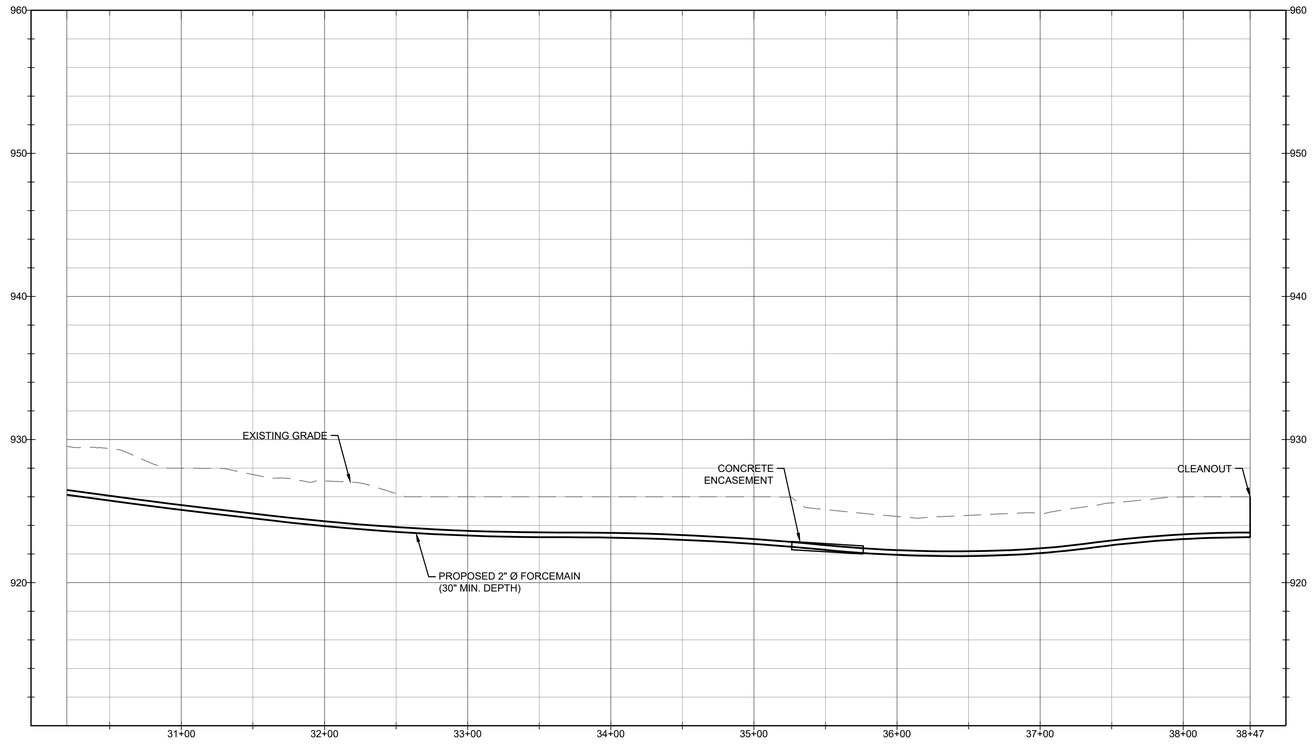
APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE
P1C-002

DRAWING NO.
C1.06





PROPOSED FORCEMAIN P1C-002 - PROFILE
30+20 TO 38+47
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

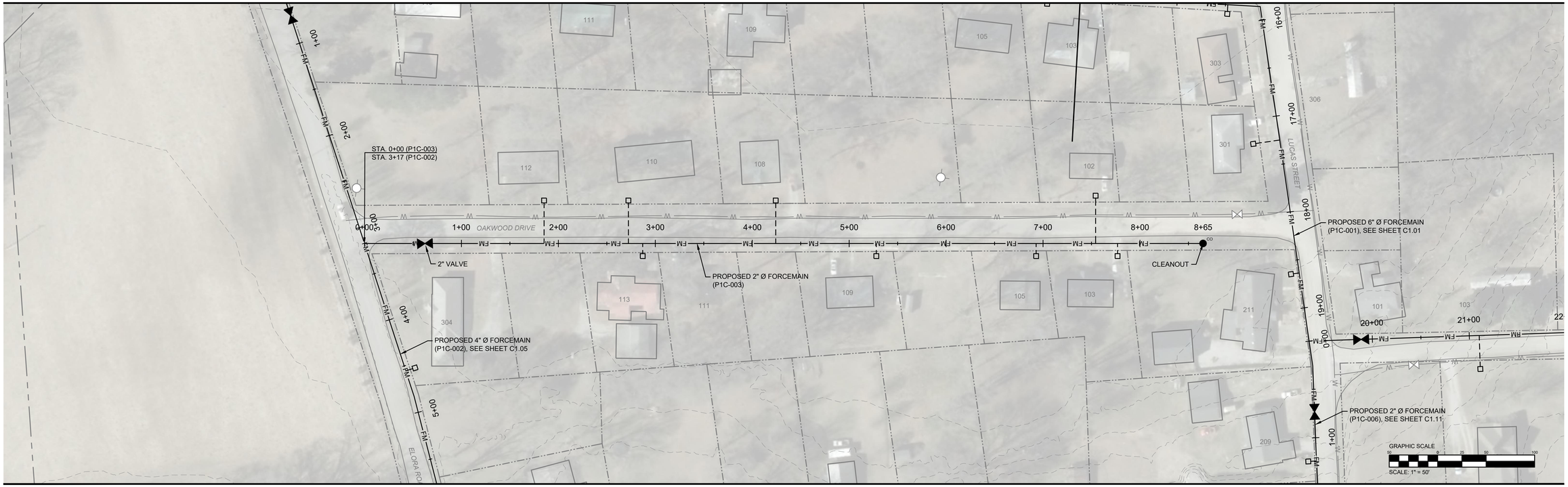
DRAWN BY
CAJ

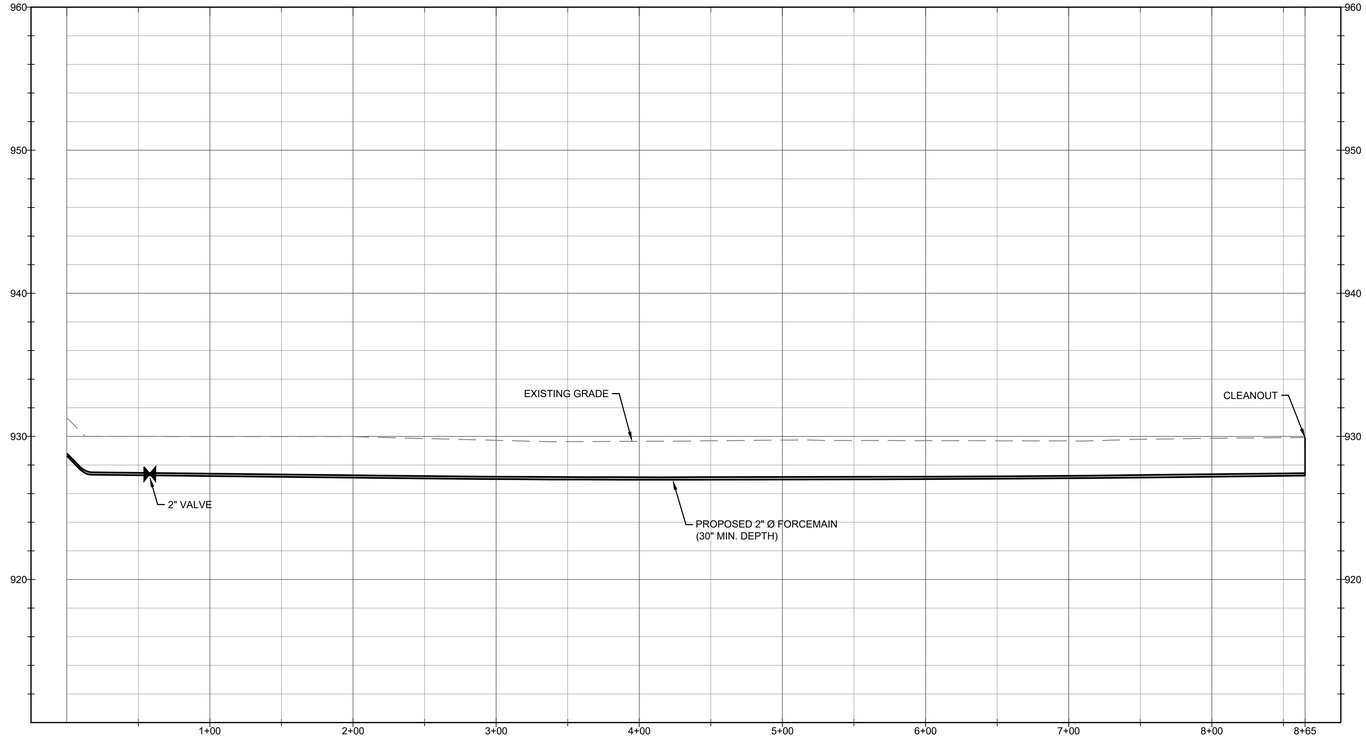
APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE
P1C-002

DRAWING NO.
C1.07





PROPOSED FORCEMAIN P1C-003 - PROFILE
0+00 TO 8+65
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

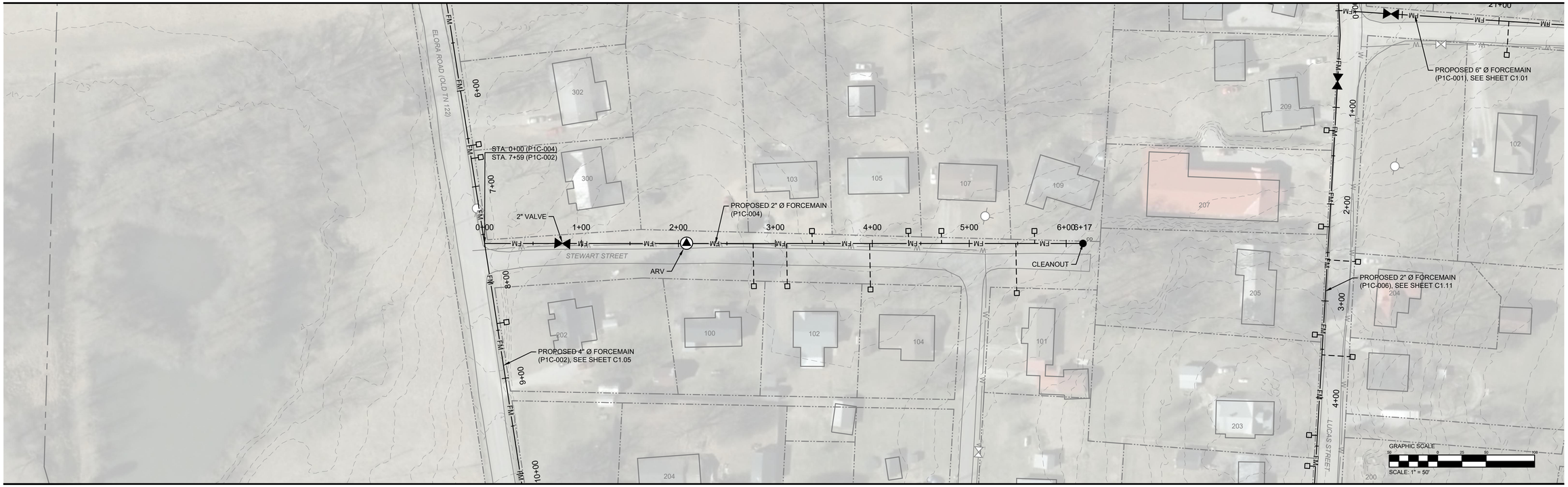
DRAWN BY
CAJ

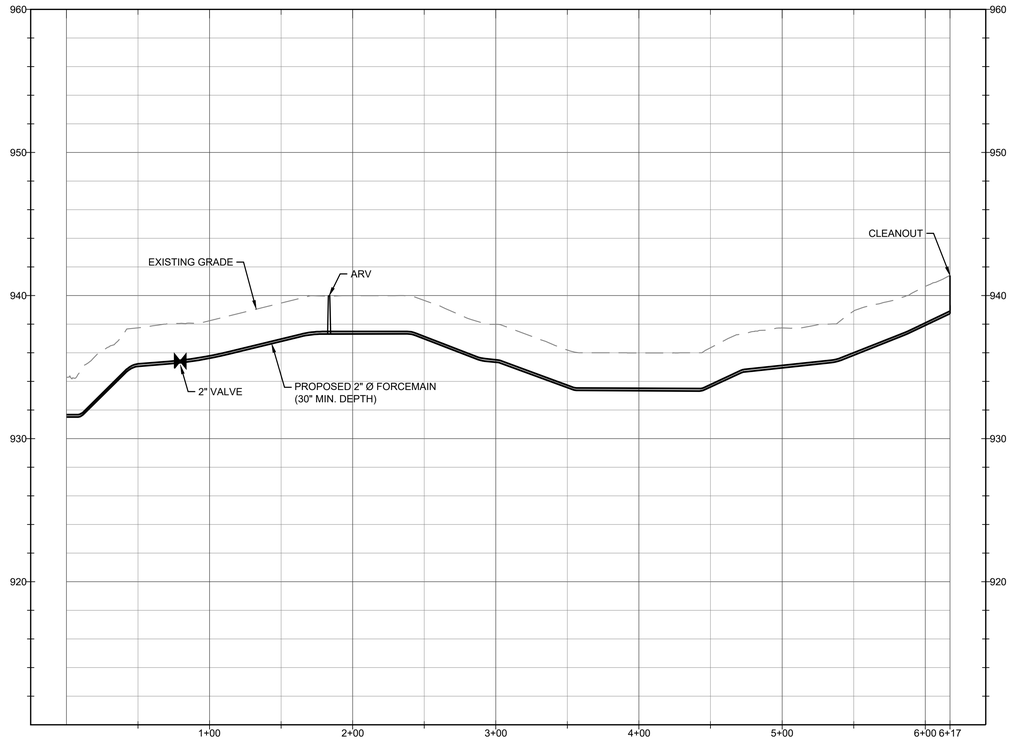
APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE
P1C-003

DRAWING NO.
C1.08





PROPOSED FORCEMAIN P1C-004 - PROFILE
0+00 TO 6+17
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

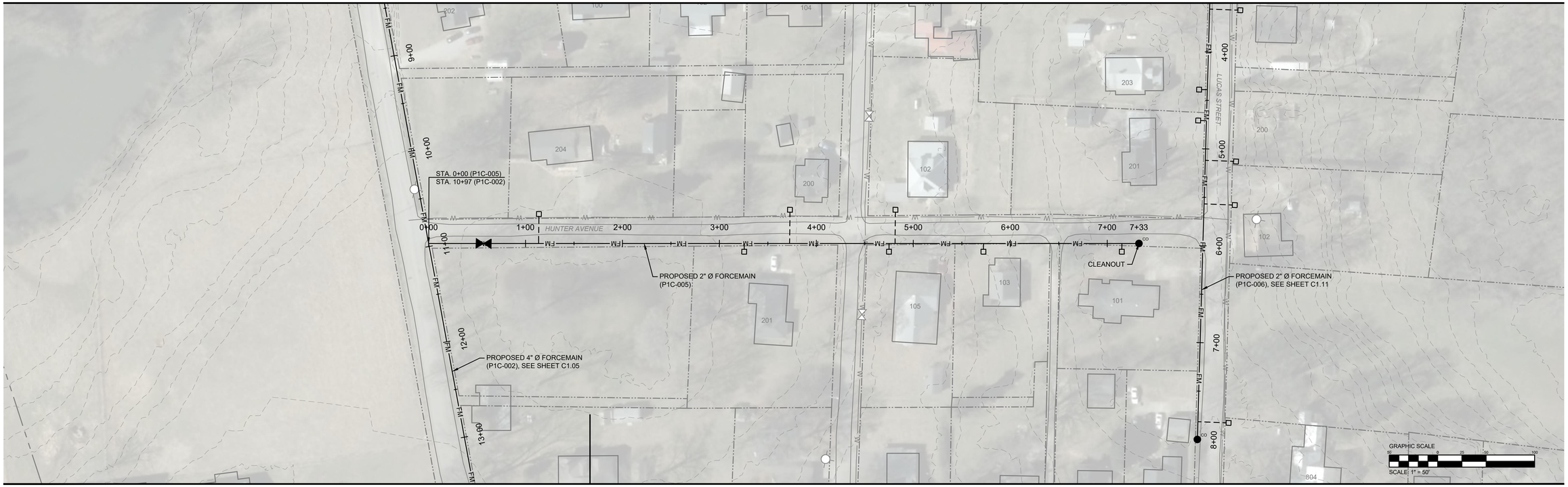
DRAWN BY
CAJ

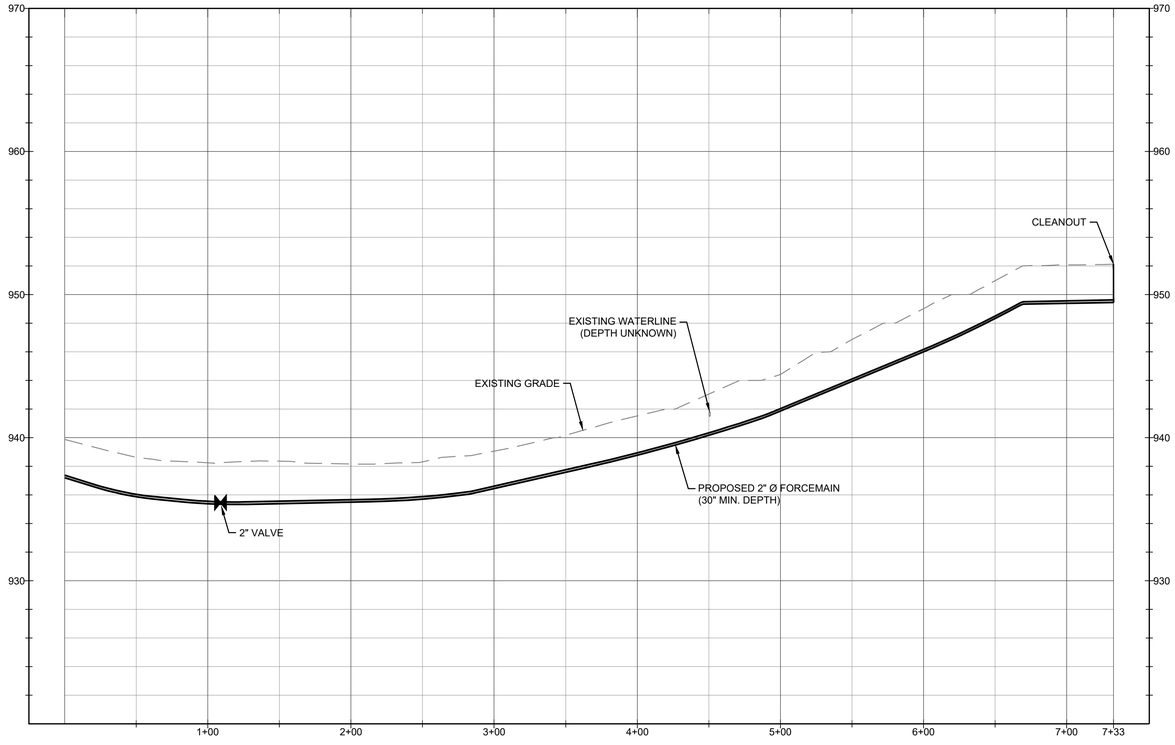
APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE P1C-004

DRAWING NO.
C1.09





PROPOSED FORCEMAIN P1C-005 - PROFILE
0+00 TO 7+33
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

ENGINEER SEAL

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

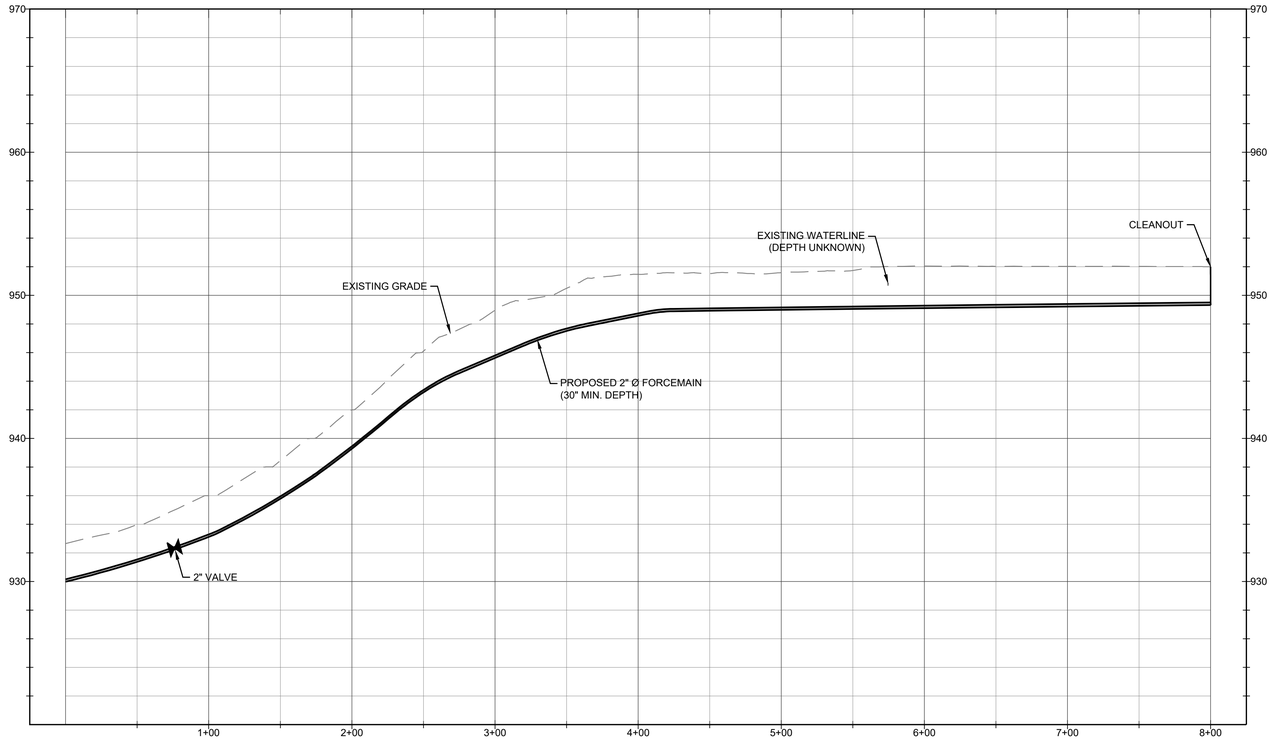
DRAWN BY
CAJ

APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE P1C-005

DRAWING NO.
C1.10



PROPOSED FORCEMAIN P1C-006 - PROFILE
0+00 TO 8+00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

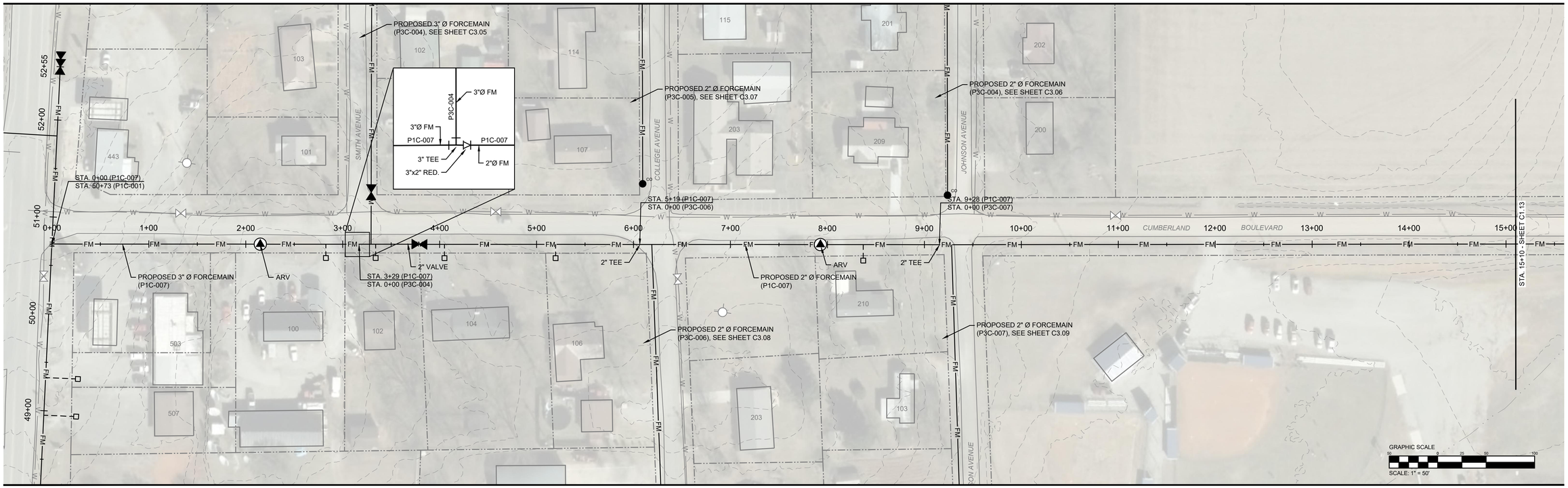
DRAWN BY
CAJ

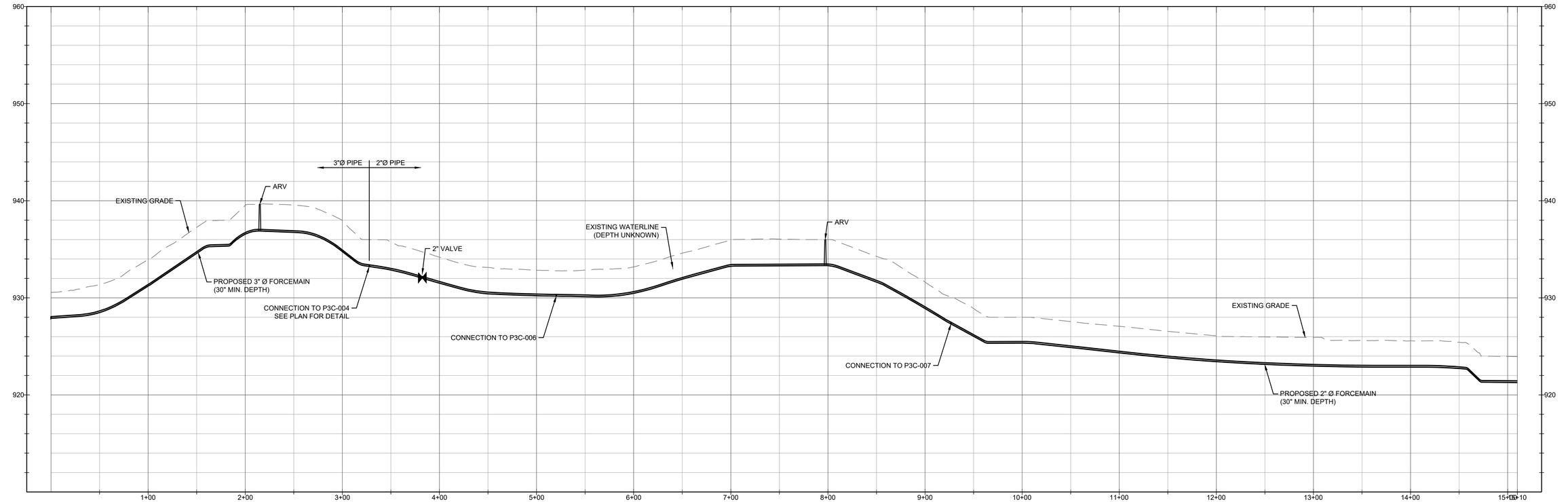
APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE P1C-006

DRAWING NO.
C1.11





PROPOSED FORCEMAIN P1C-007 - PROFILE
0+00 TO 15+10
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

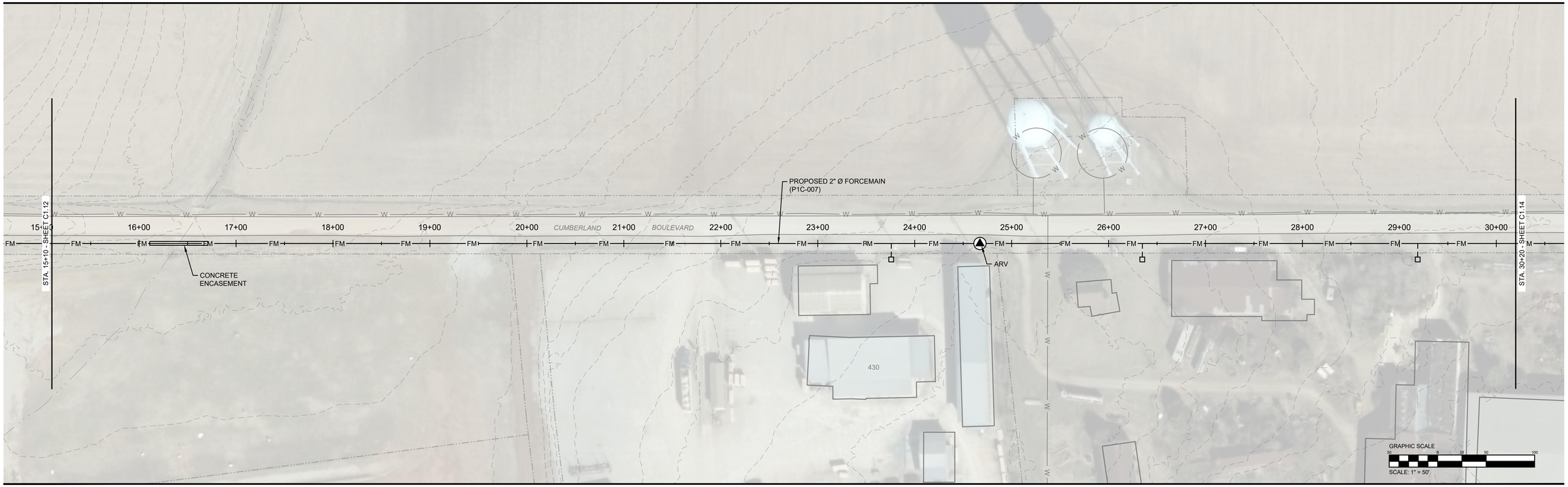
DRAWN BY
CAJ

APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE P1C-007

DRAWING NO.
C1.12



PROPOSED FORCEMAIN P1C-007 - PROFILE
15+10 TO 30+20
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

ENGINEER SEAL

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

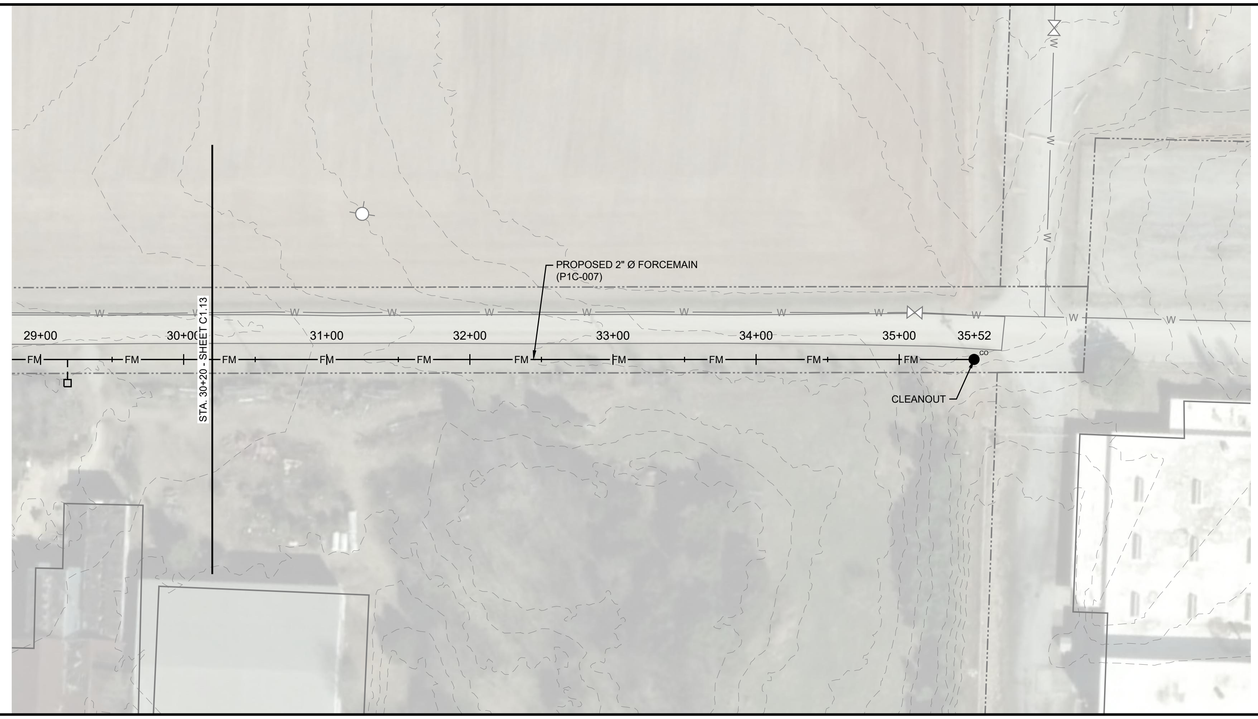
DRAWN BY
CAJ

APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE
P1C-007

DRAWING NO.
C1.13



GRAPHIC SCALE
50 0 25 50 100
SCALE: 1" = 50'

PROPOSED FORCEMAIN P1C-007 - PROFILE
30+20 TO 35+52
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
232 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

ENGINEER SEAL

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

DRAWN BY
CAJ

APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
PLAN & PROFILE P1C-007

DRAWING NO.
C1.14

PROPOSED SEPTIC TANK SIZES

TANK	SIZE	QUANTITY
A	3,000	2
B	3,000	1
C	1,500	1
D	1,000	1
E	1,500	1

NOTES

1. ALL TANKS TO BE H20 RATED
2. TANK A (2) TO BE IN PARALLEL
3. ALL NEW SEWER LATERAL SHALL BE 6" SCH 40 PVC
4. ALL TANKS TO HAVE SIMPLEX PUMPS
5. ALL PUMPS TO BE 240/1/60
6. EFFLUENT SERVICE LINES TO BE 1.5-INCH

GENERAL NOTES

1. ALL EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO COMMENCING WORK.
2. CONTRACTOR SHALL LOCATE ALL EXISTING SEPTIC TANK AND LATERAL CONNECTIONS. ACTUAL LOCATIONS SHALL BE REPORTED TO THE ENGINEER. NEW SEPTIC TANKS SHALL NOT BE INSTALLED UNTIL THE ENGINEER HAS BEEN NOTIFIED OF THE LOCATION OF THE EXISTING SEPTIC TANKS AND LATERAL CONNECTIONS.
3. THE LOCATIONS OF NEW SEPTIC TANKS SHOWN ON THE PLAN ARE BASED ON THE BEST AVAILABLE INFORMATION ON THE LOCATION OF EXISTING SEPTIC TANKS. THE FINAL PROPOSED LOCATIONS OF NEW SEPTIC TANKS WILL NOT BE FINALIZED UNTIL EXISTING TANKS LOCATIONS AND CONNECTING LATERALS HAVE BEEN VERIFIED.
4. SEWER SERVICE FOR THE SCHOOL SHALL REMAIN OPERATIONAL THROUGHOUT THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTING AND PROPERLY DISPOSING OF SEWAGE WHEN FLOW DIVERSION IS NECESSARY. UNDER NO CIRCUMSTANCES SHALL SEWAGE BE PERMITTED TO ACCUMULATE IN OPEN TRENCHES OR ON THE SURFACE OF THE GROUND.

GRAPHIC SCALE
40 0 20 40 80
SCALE: 1" = 40'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

ENGINEER SEAL

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH	DRAWN BY
	CAJ
	APPROVED BY
	JDF

DATE	ISSUE
3/5/21	IFB

TITLE
HUNTLAND SCHOOL SITE PLAN

DRAWING NO.
C4.0

PROPOSED SEPTIC TANK SIZES

TANK	SIZE	QUANTITY
F	3,000	1
G	1,500	1
H	1,500	1
I	1,500	1
J	3,000	1

NOTES

1. ALL TANKS TO BE H20 RATED
2. ALL NEW SEWER LATERAL SHALL BE 6" SCH 40 PVC
4. ALL TANKS TO HAVE SIMPLEX PUMPS
5. ALL PUMPS TO BE 240/1/60
6. EFFLUENT SERVICE LINES TO BE 1.5-INCH

GENERAL NOTES

1. ALL EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO COMMENCING WORK.

2. CONTRACTOR SHALL LOCATE EXISTING SEPTIC TANK AND LATERAL CONNECTIONS, WHERE APPLICABLE. ACTUAL LOCATIONS SHALL BE REPORTED TO THE ENGINEER. NEW SEPTIC TANKS SHALL NOT BE INSTALLED UNTIL THE ENGINEER AND THOMPSON HARDWOOD HAVE APPROVED THE PROPOSED LOCATIONS.

3. THE LOCATIONS OF NEW SEPTIC TANKS SHOWN ON THE PLAN ARE BASED ON THE BEST AVAILABLE INFORMATION. THE FINAL PROPOSED LOCATIONS OF NEW SEPTIC TANKS WILL NOT BE FINALIZED UNTIL EXISTING TANKS LOCATIONS AND CONNECTING LATERALS HAVE BEEN VERIFIED AND UNTIL THOMPSON HARDWOOD HAS APPROVED THE PROPOSED LOCATIONS.

4. SEWER SERVICE FOR THOMPSON HARDWOOD, WHERE APPLICABLE, SHALL REMAIN OPERATIONAL THROUGHOUT THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTING AND PROPERLY DISPOSING OF SEWAGE WHEN FLOW DIVERSION IS NECESSARY. UNDER NO CIRCUMSTANCES SHALL SEWAGE BE PERMITTED TO ACCUMULATE IN OPEN TRENCHES OR ON THE SURFACE OF THE GROUND.

GRAPHIC SCALE
100 0 50 100 200
SCALE: 1" = 100'

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

ENGINEER SEAL

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

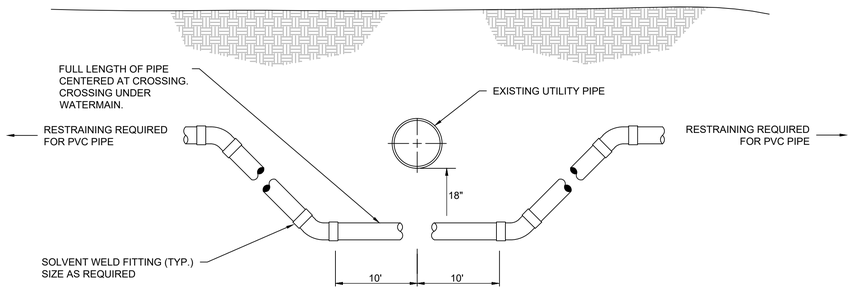
DRAWN BY
CAJ

APPROVED BY
JDF

DATE	ISSUE
3/5/21	IFB

TITLE
THOMPSON APPALACHIAN HARDWOOD SITE PLAN

DRAWING NO.
C5.0

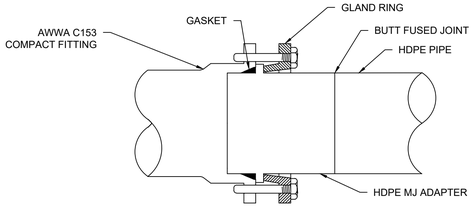


CONFLICTING UTILITY CROSSING DETAIL

NTS

NOTES:

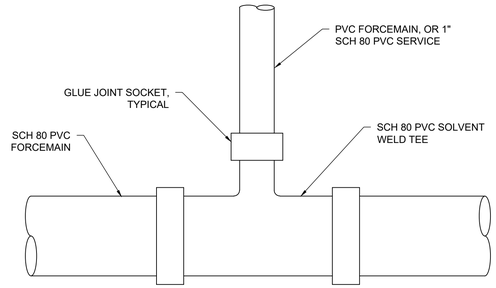
1. WHEREVER POSSIBLE DEFLECTION OF THE PIPE WILL BE USED TO AVOID EXISTING OBSTRUCTIONS. THIS CROSSING SHALL BE USED ONLY WHEN APPROVED BY ENGINEER.
2. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, BOTH WATER AND SEWER SHALL BE CONSTRUCTED OF RESTRAINED JOINT PIPE AND SHALL BE PRESSURE TESTED TO ASSUME WATER TIGHTNESS.
3. HDD HDPE PIPE MAY BE USED IN THE ALTERNATIVE, FUSED JOINTS REQUIRED.



HDPE MECHANICAL JOINT ADAPTER CONNECTION DETAIL

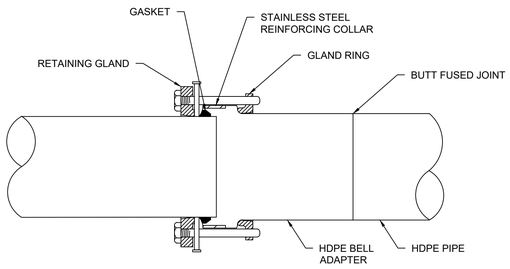
NTS

NOTE:
ALL HDPE MECHANICAL JOINTS REQUIRE SPLIT STYLE STAINLESS STEEL INSERT STIFFENERS IN HDPE PIPE END.



TYPICAL SCH 80 PVC SOLVENT WELD FITTING

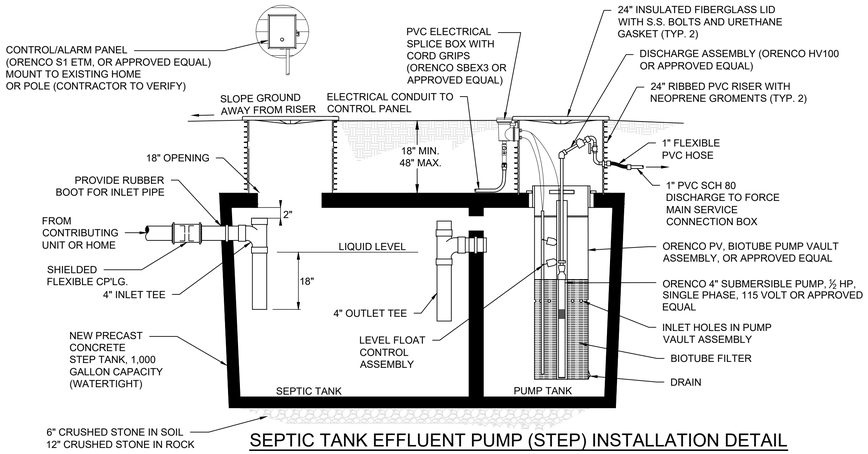
NTS



HDPE BELL JOINT ADAPTER CONNECTION DETAIL

NTS

HDPE TO PVC/DIP TRANSITION:
THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN) AWAY FROM MATERIAL TRANSITION.

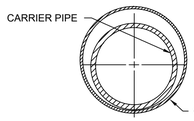


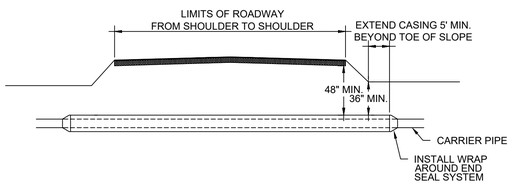
SEPTIC TANK EFFLUENT PUMP (STEP) INSTALLATION DETAIL

NTS

NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR LOCATING THE EXISTING SEPTIC TANK ON THE SUBJECT PROPERTY.
2. REMOVE AND DISPOSE OF THE EXISTING SEPTIC TANK.
3. NEW SEPTIC TANK, INSPECTION PORTS, ACCESS RISERS AND TANK CONNECTIONS SHALL BE WATERTIGHT. TANK SHALL BE FIELD TESTED FOR WATER TIGHTNESS.
4. SEPTIC TANKS WITHIN TRAFFIC LOADING CONDITIONS SHALL BE DESIGNED BY AN ENGINEER TO MEET THE ANTICIPATED LOADING. DEPTH OF BURIAL, TRAFFIC OR NON-TRAFFIC LOADING SHALL BE CONSIDERED.
5. PLUMBING BETWEEN THE STRUCTURE AND SEPTIC TANK AND SEPTIC TANK AND FORCE MAIN SERVICE CONNECTION BOX SHALL BE WATERTIGHT AND INSTALLED IN ACCORDANCE WITH STATE AND LOCAL CODES.
6. ALL ELECTRICAL WORK SHALL BE INSTALLED BY A LICENSED ELECTRICIAN AND INSTALLED IN ACCORDANCE WITH STATE AND LOCAL CODES.





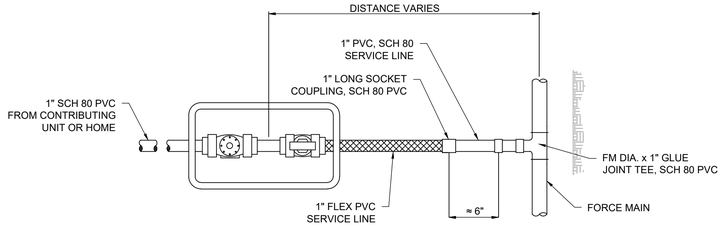
TDOT ROAD CROSSING DETAIL

NTS

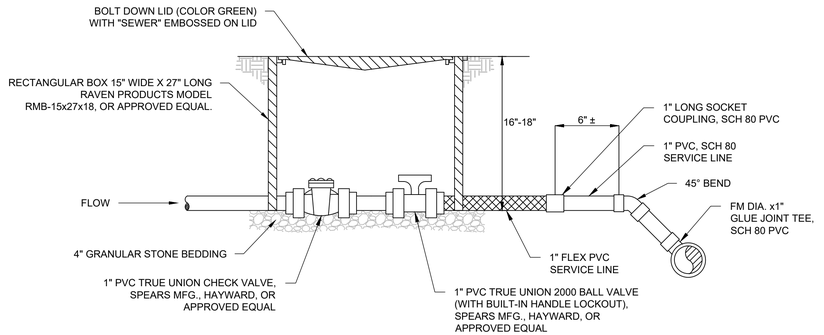
NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH TENNESSEE DEPT OF TRANSPORTATION RULES AND REGULATIONS FOR ACCOMMODATING UTILITIES WITHIN HIGHWAY RIGHTS OF WAY LATEST REVISION.
2. LOCATE EXISTING UTILITIES BEFORE CONSTRUCTION.
3. THE CASING PIPE SHALL BE HDPE, IPS DR17.
6. THE CARRIER PIPE SHALL BE HDPE, IPS DR11.

CARRIER PIPE NORMAL SIZE (INCHES)	CASING PIPE NOMINAL DIAMETER (INCHES)
2	4
3	6
4	6
6	8
8	10



PLAN VIEW



SECTION VIEW

TYPICAL SERVICE CONNECTION BOX DETAIL

NTS

NOTES:

1. LOCATE SERVICES AT EXTENTS OF RIGHT-OF-WAY UNLESS NOTED OTHERWISE.
2. ALTERNATIVELY, HDPE FITTINGS & SERVICE LINE MAY BE USED. USE COMPRESSION FITTINGS AND VALVES.

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

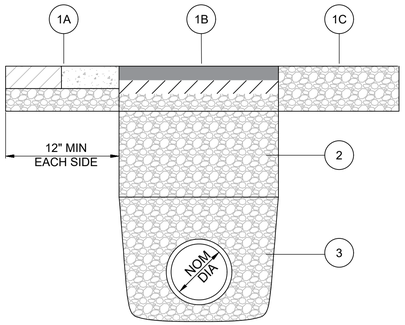
LOGO

NORTH	DRAWN BY
	CAJ
	APPROVED BY
	JDF

DATE	ISSUE
3/5/21	IFB

TITLE
CIVIL DETAILS

DRAWING NO.
CD1.0



PAVEMENT REPAIR / IMPROVED SURFACE REPAIR DETAIL

NTS

1A DRIVEWAYS AND PARKING LOTS
COMPACTED MINERAL AGGREGATE BASE. THE THICKNESS SHALL BE THE GREATER OF 8" OR THE EXISTING DEPTH OF BASE MATERIAL. THE MINERAL AGGREGATE SHALL BE COMPACTED 303-01, TYPE A, GRADING D ("33-P"), PER TDOT. SPECIFICATIONS. ASPHALTIC CONCRETE SURFACE COURSE SHALL BE MINIMUM 2" THICK, GRADING C, SECTION 307 SSRBC. PORTLAND CEMENT CONCRETE SURFACE COARSE SHALL BE MINIMUM 4" THICK, CLASS B.

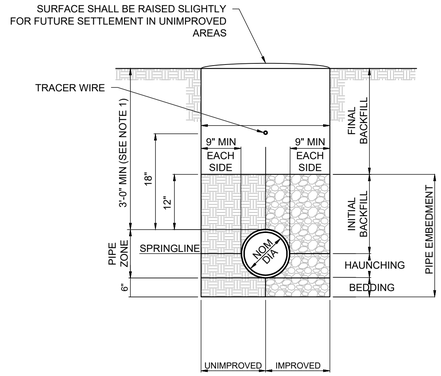
1B CITY STREETS
COMPACTED MINERAL AGGREGATE BASE, 8" MINIMUM. A PRIME COAT SHALL BE APPLIED PRIOR TO 9" ASPHALTIC CONCRETE BINDER (307B MODIFIED), AND A TACK COAT APPLIED PRIOR TO 2" ASPHALTIC CONCRETE SURFACE (411E).

1C GRAVEL TRAFFIC AREAS
COMPACTED MINERAL AGGREGATE BASE. THE THICKNESS SHALL BE THE GREATER OF 6" OR THE EXISTING DEPTH OF BASE MATERIAL. THE MINERAL AGGREGATE SHALL BE COMPACTED 303-01, TYPE A, GRADING D ("33-P"), PER TDOT SPECIFICATIONS.

2 CRUSHED STONE BACKFILL PER SPECIFICATIONS

3 CRUSHED STONE BEDDING PER SPECIFICATIONS

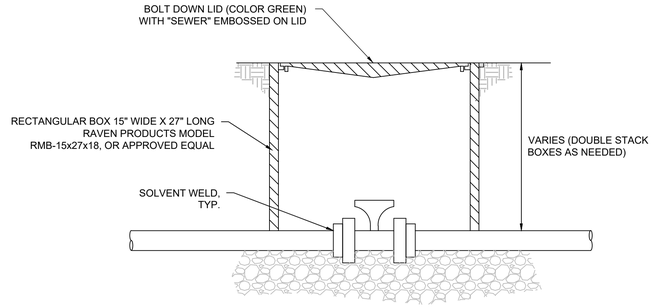
GENERAL REQUIREMENTS
1. ALL STREET CUTS MUST BE REPAIRED IMMEDIATELY AFTER BACKFILLING AND ACCORDING TO THIS STANDARD.
2. A ROAD CUT PERMIT AND AN APPROVED TRAFFIC CONTROL PLAN ARE REQUIRED FOR ALL CUTS IN STREETS.
3. WHERE LONGITUDINAL CUTS ARE MADE THE OWNER RESERVES THE RIGHT TO REQUIRE ADDITIONAL RESURFACING BEYOND THE LIMITS OF THE REPAIR TO ENSURE THE PROPER RIDING REQUIREMENTS AND THE STABILITY OF THE PAVEMENT.
4. FOLLOWING TEMPORARY PAVEMENT REPAIRS, A MINIMUM OF 48 HOURS SHALL TRANSPIRE PRIOR TO COMPLETING PERMANENT PAVEMENT REPAIRS.
5. BARRICADES OR METAL PLATES SHALL BE PLACED AROUND ALL HOLES WIDER THAN 4 INCHES UNTIL CONCRETE CAN WITHSTAND TRAFFIC.
6. IMPROVED SURFACE RESTORATION INCLUDES ALL AREAS AND SURFACES EXCEPT AREAS TO RECEIVE FINAL GRADING AND SEEDING. IMPROVED SURFACES INCLUDES BUT NOT LIMITED TO STREETS, DRIVEWAYS, PARKING LOTS, SIDEWALKS, CURB AND GUTTER, AND GRAVEL TRAFFIC AREAS.
7. IMPROVED SURFACES SHALL BE CUT TO NEAT AND STRAIGHT LINES TO MINIMIZE THE WIDTH OF SURFACE REPLACEMENT AND TO PREVENT CRACKS OR DAMAGE IN THE SURROUNDING SURFACE.



PVC PRESSURE PIPE INSTALLATION DETAIL

NTS

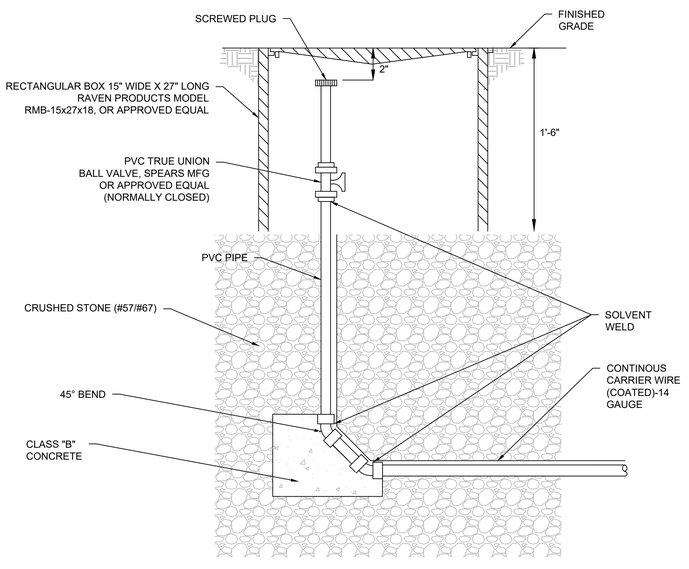
NOTES:
1. PROVIDE 4'-0" MINIMUM COVER UNDER PUBLIC ROADWAYS.
2. BEDDING, HAUNCHING, AND INITIAL BACKFILL SHALL BE CRUSHED STONE COMPACTED TO 95% PER ATSM D698.
3. FINAL BACKFILL SHALL BE COMMON EARTH, CRUSHED STONE, OR FLOWABLE FILL. CRUSHED STONE SHALL BE USED UNDER ALL IMPROVED SURFACES SUBJECT TO WHEEL LOAD. FLOWABLE FILL SHALL ONLY BE USED WHEN REQUIRED BY A DOT PERMIT REQUIREMENT & WITH ENGINEER APPROVAL.
4. PIPE TO BE CONTINUOUSLY SUPPORTED ALONG LENGTH OF PIPE BARREL EXCEPT AT BELL. BELL HOLES ARE REQUIRED SUCH THAT NO BEARING LOAD IS TAKEN BY THE BELL.
5. NOMINAL DIAMETER SHALL REFER TO CASING DIAMETER IN CASED INSTALLATIONS.
6. TRACER WIRE SHALL BE 14GA, THHN, SOLID COPPER WITH GREEN INSULATED JACKET AND WATERPROOF GREASE FILLED WIRE CONNECTORS AT JUNCTIONS.



PVC BALL VALVE ASSEMBLY DETAIL

NTS

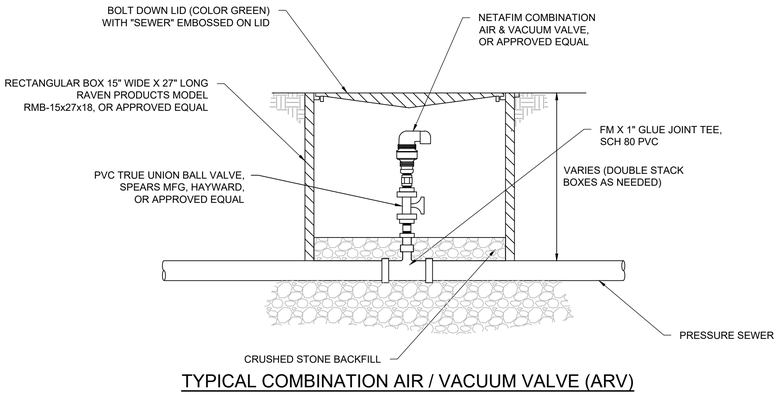
NOTES:
1. PVC BALL VALVES TO BE USED ON 2" & 3" FORCEMAIN. BALL VALVES SHALL BE TRUE UNION BY SPEARS MFG., HAYWARD, OR APPROVED EQUAL.



TYPICAL TERMINAL CLEANOUT DETAIL

NTS

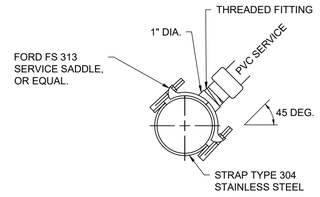
NOTES:
1. CLEANOUT SIZES SHALL MATCH THE SIZES OF THE FORCEMAINS ON WHICH THEY ARE TO BE INSTALLED.



TYPICAL COMBINATION AIR / VACUUM VALVE (ARV)

NTS

NOTES:
1. LOCATE ENTIRELY WITHIN RIGHT-OF-WAY.
2. USE NIPPLES BETWEEN PVC TEE, BALL VALVE, AND ARV.



SERVICE SADDLE CONNECTION

NTS

NOTES:
1. TO BE USED WITH ENGINEER APPROVAL.

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

ENGINEER SEAL

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

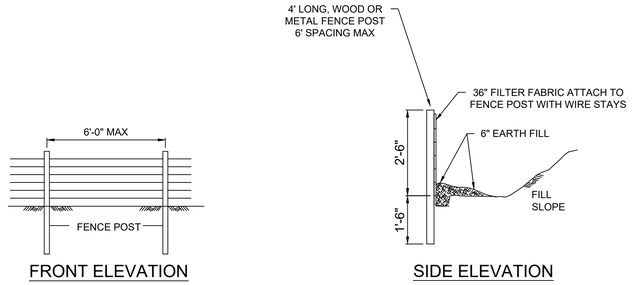
LOGO

NORTH	DRAWN BY: CAJ
	APPROVED BY: JDF

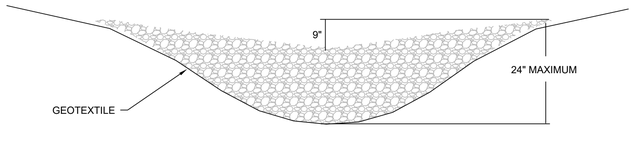
DATE	ISSUE
3/5/21	IFB

TITLE
CIVIL DETAILS

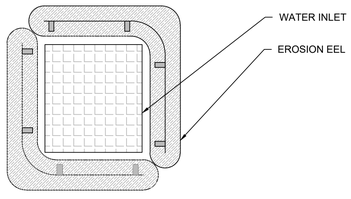
DRAWING NO.
CD2.0



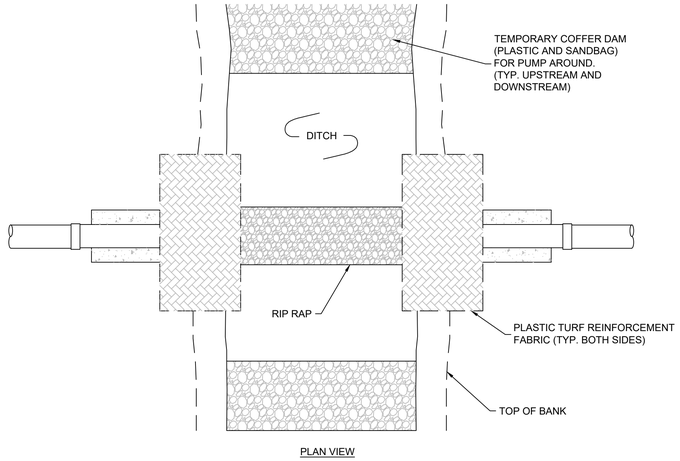
TYPICAL SILT FENCE DETAIL
NTS

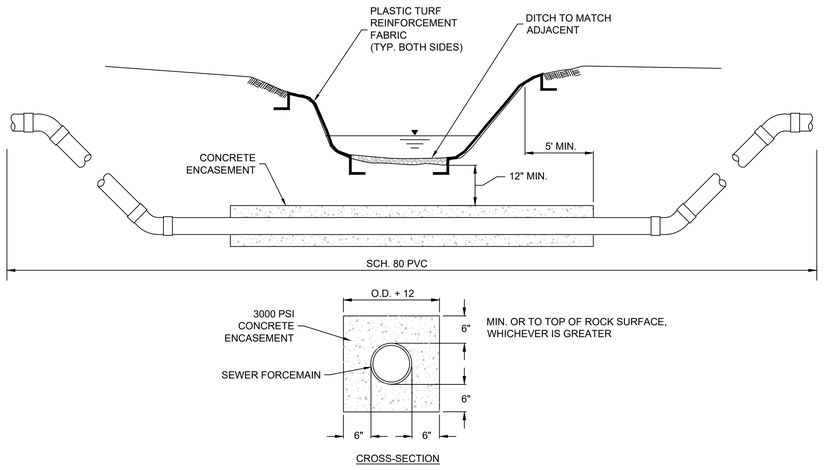


CHECK DAM DETAIL
NTS



EROSION EEL DETAIL
NTS





TYPICAL CREEK CROSSING AND CONCRETE ENCASEMENT DETAIL
NTS

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

ENGINEER SEAL

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

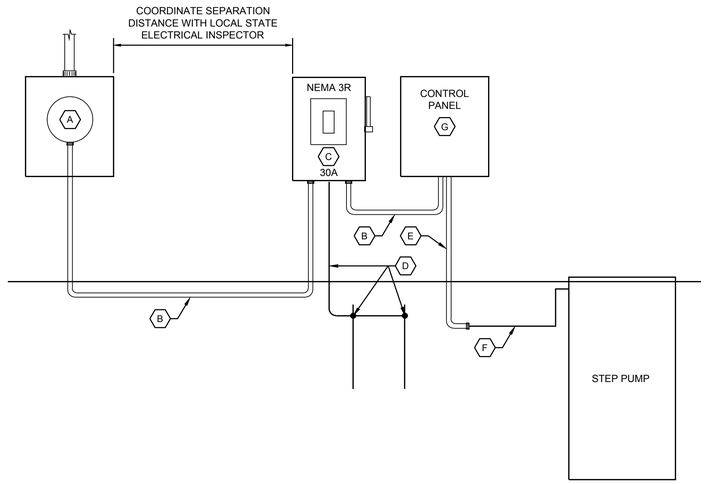
LOGO

NORTH	DRAWN BY
	CAJ
	APPROVED BY
	JDF

DATE	ISSUE
3/5/21	IFB

TITLE
CIVIL DETAILS

DRAWING NO.
CD3.0



DETAIL

TYPICAL SIMPLEX STEP PUMP
FEEDER DIAGRAM

DRAWING NOTES:

A. EXISTING METER BASE LOCATED ON RESIDENCE EXTERIOR. PROVIDE AND INSTALL EKSTROM EK SERIES METER EXTENDER ADAPTER ON EXISTING METER SOCKET. COORDINATE METER BASE JAW CONFIGURATION IN FIELD. THE OWNER WILL PROVIDE THE BREAKER CONNECTION, CONDUIT AND CABLING, AND 30A DISCONNECT FOR THE HUNTLAND SCHOOL AND THOMPSON APPALACHIAN HARDWOOD FACILITIES. CONTRACTOR IS RESPONSIBLE FOR MOUNTING CONTROL PANEL G AND CONNECTION TO THE DISCONNECT.

B. 1/2"C, 3#10, #10GND. COORDINATE ROUTING WITH TANK LOCATION ROUTE UNDERGROUND AT 24" BELOW GRADE IF CONDUIT LENGTH IS GREATER THAN 6'.

C. FUSED DISCONNECT SHALL BE SERVICE ENTRANCE RATED WITH DUAL ELEMENT TIME DELAY FUSES. ENCLOSURE SHALL BE LOCKABLE. LOCATION OF SERVICE DISCONNECT SHALL BE INSTALLED SEPARATELY FROM THE LOCATION OF THE EXISTING SERVICE METER BASE. DISCONNECT CANNOT BE INSTALLED DIRECTLY ADJACENT TO THE EXISTING METER BASE. DISCONNECT MAY BE MOUNTED ON 4"X4"X6' PRESSURE TREATED WOOD POST ALONG WITH THE PUMP STATION CONTROL PANEL.

D. SOLID BARE #6CU GROUND CONDUCTOR TO 3/4"X10' COPPERCLAD GROUND ROD. USE BURNDY HIGH GROUND COMPRESSION FITTINGS.

E. 1 1/4"C WITH DIRECT BURIAL PUMP CABLE. EXTEND CONDUIT TO 24" BELOW GRADE WITH NYLON BUSHING ON CONDUIT END.

F. PUMP CONTROL CABLE. DIRECT BURY MINIMUM 24" BELOW GRADE. REPAIR ALL EXISTING DISTURBED SURFACES TO MATCH EXISTING. COORDINATE WITH RESIDENCE OWNER. PROVIDE 2" SCHEDULE 80 CONDUIT SLEEVES WHERE DRIVES OR PARKING AREAS.

G. PUMP CONTROL PANEL INSTALLED ON BUILDING EXTERIOR. MOUNT CONTROL PANEL WITHIN SIGHT OF PUMP STATION. COORDINATE MOUNTING AND LOCATION WITH ENGINEER.

GENERAL NOTES:

1. ALL DAMAGES AND PENETRATIONS OF EXISTING STRUCTURES AND/OR EQUIPMENT SHALL BE IMMEDIATELY REPLACED, REPAIRED AND/OR PROPERLY PATCHED.
2. EXTREME CARE SHALL BE EXERCISED SO AS NOT TO DISTURB EXISTING EQUIPMENT AND PROPERTY BEYOND THE NECESSARY REQUIREMENTS AND SCOPE OF WORK.
3. ACCESS AND WORKING HOURS SHALL BE STRICTLY COORDINATE WITH EACH OWNER.
4. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS RELATED TO SCOPE OF WORK. CONFIRM CONFIGURATION OF EXISTING METER BASES AND DESIGNED CONNECTIONS. MAKE NECESSARY ADJUSTMENTS AND INCLUDE ALLOWANCES TO FURNISH A FULLY OPERATING GRINDER PUMP SYSTEM.

ELECTRICAL SPECIFICATIONS

1. THE ELECTRICAL CONTRACT WORK SHALL INCLUDE ALL ELECTRICAL MATERIALS AND INSTALLATION TO RESULT IN A BUILDING READY AND SUITABLE FOR USE AS INTENDED BY OWNER. THE CONTRACTOR SHALL REFER TO ALL PLANS INCLUDING THE SITE, ARCHITECTURAL, AND MECHANICAL PLANS.

1.2 ALL ELECTRICAL INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND ITS SUPPLEMENTS IN FORCE AT THE TIME OF BID OPENING, AND ALL MATERIALS EMPLOYED SHALL BE UL LISTED AND APPROVED AND BEAR THE UL OFFICIAL LABELS WHERE SUCH LABELING IS CUSTOMARY. IN THE EVENT THAT LOCAL CODES ARE MORE RIGID THAN THE NATIONAL CODE, BOTH CODES SHALL THEN BE CONSIDERED AS JOINTLY GOVERNING AND THE REQUIREMENTS OF THE MOST RIGID SHALL THEN PREVAIL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SELECTION AND APPLICATION OF MATERIALS AND METHODS OF THEIR INSTALLATION. PRINCIPAL FEATURES ARE AS FOLLOWS:

A. CONNECTIONS TO NEW STEP PUMP.

B. WIRING DEVICES, OUTLETS, AND ETC.

1.3 POWER SERVICE

A. EXISTING POWER SERVICE IS 120/240-VOLTS, 1-PHASE, 3-WIRE. CONTRACTOR SHALL CONSULT WITH THE LOCAL POWER UTILITY AND COMPLY WITH ALL THEIR INSTRUCTIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL FEES AND CONSTRUCTION CONTRIBUTIONS REQUIRED BY THE POWER COMPANIES. COORDINATE METER EXTENSIONS

1.4 DISTRIBUTION EQUIPMENT

A. DISTRIBUTION EQUIPMENT AND BRANCH CIRCUIT PANELBOARDS SHALL BE MOLDED CASE CIRCUIT BREAKER EQUIPMENT HAVING THE NECESSARY INTERRUPTING RATINGS BUT NOT LESS THAN 10,000 AIC. GROUND FAULT SENSING AND AUTOMATIC INTERRUPTING SHALL BE FURNISHED ON ANY OUTDOOR POWER CIRCUITS AND AS OTHERWISE REQUIRED. EQUIPMENT SHALL BE SQUARE-D OR EQUAL.

1.5 GROUNDING

A. PROVIDE CODE GROUNDING FOR ANY SYSTEM ADDITIONS.

1.6 CONNECTION OF EQUIPMENT

A. THE ELECTRICAL CONTRACTOR SHALL CONNECT ALL MECHANICAL EQUIPMENT FURNISHED BY OTHER TRADES INCLUDING PUMP STATION EQUIPMENT EQUIPMENT. CONNECTION SHALL BE EXTENDED TO ALL ELECTRICALLY OPERATED EQUIPMENT. WHERE REQUIRED THE ELECTRICAL CONTRACTOR SHALL FURNISH DISCONNECT SWITCHES.
STARTER HEATER ELEMENTS AND OVER CURRENT PROTECTION SHALL BE CHECKED FOR PROPER APPLICATION TO THE DEVICE BEING SERVED. DISCONNECTS AND SWITCHES SHALL BE SQUARE-D COMPANY OR EQUAL. ALL DISCONNECTS SHALL BE HEAVY DUTY RATED.

1.7 TYPES OF WIRING AND RACEWAYS

A. THE TYPES AND GRADES OF MATERIALS TO BE EMPLOYED IN THE WIRING SYSTEMS ARE SUBJECT TO BUILDING STRUCTURAL CONDITIONS AND THE GOVERNING CODES. THE WIRING SHALL BE RIGID GALVANIZED CONDUIT WHERE ABOVE GRADE. ALL CONDUCTORS SHALL BE MTW COPPER.
MINIMUM SIZE CONDUIT 1/2".

B. UNLESS PARTICULARLY STATED OTHERWISE, THE RACEWAY SHALL BE RUN CONCEALED.

C. ALL CONDUITS INSTALLED UNDERGROUND, IN CONCRETE SLABS, OR EXTERIOR OF BUILDINGS, MAY BE PLASTIC "PVC" EXCEPT WHEN EXPOSED, THEY SHALL BE SUITABLE GALVANIZED STEEL.

D. WIRING SYSTEMS WITH OUTLET DEVICES AND BOXES, SHALL BE GROUNDED AS REQUIRED BY THE GOVERNING CODES.

1.8 MATERIALS

A. BASIC MATERIALS AND DEVICES REQUIRED IN THE WIRING SYSTEMS SHALL BE UL APPROVED STANDARDS. IN THE EVENT THAT UL STANDARD IS REVISED, SUPPLEMENTED, OR MODIFIED, ETC., THE LATEST REQUIREMENTS SHALL THEN GOVERN.

B. THE CONTRACTOR SHALL SUBMIT A LIST OF MATERIALS PROPOSED TO BE USED IN THE CONSTRUCTION OR PROVIDE SAMPLES, ETC., FULLY ESTABLISHING THE TYPE, GRADE, AND QUALITY OF EACH DEVICE OR ITEM OF MATERIAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ONLY SUCH DEVICES AND MATERIALS AS OBVIOUSLY MEET GOVERNING REQUIREMENTS. ITEMS TO BE SUBMITTED INCLUDE CNODUIT, WIRE, DISCONNECTS, METER BASE EXTENSIONS AND OTHER MAJOR SYSTEM COMPONENTS.

1.9 JUNCTION BOXES AND FITTINGS

A. ALL EXTERIOR JUNCTION BOXES SHALL BE FS TYPE WEATHERPROOF.

B. ALL CONDUIT FITTINGS SHALL BE RAINTIGHT.

1.10 IDENTIFICATION

A. PROVIDE LABELING OF ALL CONTROL AND POWER WIRING.

1.11 WORK QUALITY

A. ALL ELECTRICAL WORK SHALL BE PERFORMED IN A WORKMENLIKE AND PROFESSIONAL MANNER BY WORKMEN SKILLED IN THE TRADE REQUIRED. THE WORK SHALL RESULT IN A FINISHED AND OPERATING SYSTEM.

1.12 GUARANTEE

A. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK TO BE FREE OF GROUNDS AND SHORT CIRCUITS AND SHALL REPAIR OR REPLACE ALL DEFECTIVE WORK WITHIN A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY THE OWNER.

1.13 CODES, PERMITS, FEES

A. THE ELECTRICAL CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS. THE ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND CONFORMING TO ALL LOCAL, STATE AND NATIONAL GOVERNING CODES. NOTE: THE PROJECT COMES UNDER STATE OF TENNESSEE ELECTRICAL INSPECTOR.

FOXPE
ENGINEERING FOR THE WATER ENVIRONMENT
233 OCEOLA AVENUE #200
NASHVILLE, TENNESSEE 37209
FOXPE.COM

ENGINEER SEAL

PROJECT
TOWN OF HUNTLAND
SEWER COLLECTION SYSTEM
3700-004

LOGO

NORTH

DRAWN BY: CAJ

APPROVED BY: JDF

DATE	ISSUE
2/26/21	IFB

TITLE
ELECTRICAL DETAILS & SPECIFICATIONS

DRAWING NO.
E1.0